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CHEN, LING C

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Leu Ser Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln
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Met Lys Leu Leu Thr Gly Leu Val Phe Cys Ser Leu Val Leu Gly Val			
1	5	10	15
agc agc cga agc ttc ttt tcg ttc ctt ggc gag gct ttt gat ggg gct			96
Ser Ser Arg Ser Phe Phe Ser Phe Leu Gly Glu Ala Phe Asp Gly Ala			
	20	25	30
cgg gac atg tgg aga gcc tac tct gac atg aga gaa gcc aat tac atc			144
Arg Asp Met Trp Arg Ala Tyr Ser Asp Met Arg Glu Ala Asn Tyr Ile			
	35	40	45
ggc tca gac aaa tac ttc cat gct cgg ggg aac tat gat gct gcc aaa			192
Gly Ser Asp Lys Tyr Phe His Ala Arg Gly Asn Tyr Asp Ala Ala Lys			
	50	55	60
agg gga cct ggg ggt gtc tgg gct gca gaa gcg atc agc gat gcc aga			240
Arg Gly Pro Gly Gly Val Trp Ala Ala Glu Ala Ile Ser Asp Ala Arg			
	65	70	75
gag aat atc cag aga ttc ttt ggc cat ggt gcg gag gac tcg ctg gct			288
Glu Asn Ile Gln Arg Phe Phe Gly His Gly Ala Glu Asp Ser Leu Ala			
	85	90	95

```

gat cag gct gcc aat gaa tgg ggc agg agt ggc aaa gac ccc aat cac 336
Asp Gln Ala Ala Asn Glu Trp Gly Arg Ser Gly Lys Asp Pro Asn His
          100                      105                      110

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```

ttc cga cct gct ggc ctg cct gag aaa tac tga 369
Phe Arg Pro Ala Gly Leu Pro Glu Lys Tyr
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```

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<210> 6
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<212> DNA
<213> Homo sapiens

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<220>
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<222> (106)..(1767)

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                                     Met Thr Ala Pro
                                     1

```

```

ggc gcc gcc ggg cgc tgc cct ccc acg aca tgg ctg ggc tcc ctg ctg 165
Gly Ala Ala Gly Arg Cys Pro Pro Thr Thr Trp Leu Gly Ser Leu Leu
   5                      10                      15                      20

```

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ttg ttg gtc tgt ctc ctg gcg agc agg agt atc acc gag gag gtg tcg 213
Leu Leu Val Cys Leu Leu Ala Ser Arg Ser Ile Thr Glu Glu Val Ser
          25                      30                      35

```

```

gag tac tgt agc cac atg att ggg agt gga cac ctg cag tct ctg cag 261
Glu Tyr Cys Ser His Met Ile Gly Ser Gly His Leu Gln Ser Leu Gln
          40                      45                      50

```

```

cgg ctg att gac agt cag atg gag acc tcg tgc caa att aca ttt gag 309
Arg Leu Ile Asp Ser Gln Met Glu Thr Ser Cys Gln Ile Thr Phe Glu
          55                      60                      65

```

```

ttt gta gac cag gaa cag ttg aaa gat cca gtg tgc tac ctt aag aag 357
Phe Val Asp Gln Glu Gln Leu Lys Asp Pro Val Cys Tyr Leu Lys Lys
          70                      75                      80

```

```

gca ttt ctc ctg gta caa gac ata atg gag gac acc atg cgc ttc aga 405
Ala Phe Leu Leu Val Gln Asp Ile Met Glu Asp Thr Met Arg Phe Arg
          85                      90                      95                      100

```

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gat aac acc gcc aat ccc atc gcc att gtg cag ctg cag gaa ctc tct 453
Asp Asn Thr Ala Asn Pro Ile Ala Ile Val Gln Leu Gln Glu Leu Ser
          105                      110                      115

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Leu	Arg	Leu	Lys	Ser	Cys	Phe	Thr	Lys	Asp	Tyr	Glu	Glu	His	Asp	Lys	
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gcc	tgc	gtc	cga	act	ttc	tat	gag	aca	cct	ctc	cag	ttg	ctg	gag	aag	549
Ala	Cys	Val	Arg	Thr	Phe	Tyr	Glu	Thr	Pro	Leu	Gln	Leu	Leu	Glu	Lys	
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gtc	aag	aat	gtc	ttt	aat	gaa	aca	aag	aat	ctc	ctt	gac	aag	gac	tgg	597
Val	Lys	Asn	Val	Phe	Asn	Glu	Thr	Lys	Asn	Leu	Leu	Asp	Lys	Asp	Trp	
	150					155					160					
aat	att	ttc	agc	aag	aac	tgc	aac	aac	agc	ttt	gct	gaa	tgc	tcc	agc	645
Asn	Ile	Phe	Ser	Lys	Asn	Cys	Asn	Asn	Ser	Phe	Ala	Glu	Cys	Ser	Ser	
165					170					175					180	
caa	gat	gtg	gtg	acc	aag	cct	gat	tgc	aac	tgc	ctg	tac	ccc	aaa	gcc	693
Gln	Asp	Val	Val	Thr	Lys	Pro	Asp	Cys	Asn	Cys	Leu	Tyr	Pro	Lys	Ala	
				185					190					195		
atc	cct	agc	agt	gac	ccg	gcc	tct	gtc	tcc	cct	cat	cag	ccc	ctc	gcc	741
Ile	Pro	Ser	Ser	Asp	Pro	Ala	Ser	Val	Ser	Pro	His	Gln	Pro	Leu	Ala	
			200					205					210			
ccc	tcc	atg	gcc	cct	gtg	gct	ggc	ttg	acc	tgg	gag	gac	tct	gag	gga	789
Pro	Ser	Met	Ala	Pro	Val	Ala	Gly	Leu	Thr	Trp	Glu	Asp	Ser	Glu	Gly	
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Thr	Glu	Gly	Ser	Ser	Leu	Leu	Pro	Gly	Glu	Gln	Pro	Leu	His	Thr	Val	
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gat	cca	ggc	agt	gcc	aag	cag	cgg	cca	ccc	agg	agc	acc	tgc	cag	agc	885
Asp	Pro	Gly	Ser	Ala	Lys	Gln	Arg	Pro	Pro	Arg	Ser	Thr	Cys	Gln	Ser	
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Phe	Glu	Pro	Pro	Glu	Thr	Pro	Val	Val	Lys	Asp	Ser	Thr	Ile	Gly	Gly	
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Ser	Pro	Gln	Pro	Arg	Pro	Ser	Val	Gly	Ala	Phe	Asn	Pro	Gly	Met	Glu	
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Asp	Ile	Leu	Asp	Ser	Ala	Met	Gly	Thr	Asn	Trp	Val	Pro	Glu	Glu	Ala	
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tct	gga	gag	gcc	agt	gag	att	ccc	gta	ccc	caa	ggg	aca	gag	ctt	tcc	1077
Ser	Gly	Glu	Ala	Ser	Glu	Ile	Pro	Val	Pro	Gln	Gly	Thr	Glu	Leu	Ser	
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ccc	tcc	agg	cca	gga	ggg	ggc	agc	atg	cag	aca	gag	ccc	gcc	aga	ccc	1125
Pro	Ser	Arg	Pro	Gly	Gly	Gly	Ser	Met	Gln	Thr	Glu	Pro	Ala	Arg	Pro	

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agc aac ttc ctc tca gca tct tct cca ctc cct gca tca gca aag ggc				1173
Ser Asn Phe Leu Ser Ala Ser Ser Pro Leu Pro Ala Ser Ala Lys Gly	345	350	355	
caa cag ccg gca gat gta act gct aca gcc ttg ccc agg gtg ggc ccc				1221
Gln Gln Pro Ala Asp Val Thr Ala Thr Ala Leu Pro Arg Val Gly Pro	360	365	370	
gtg atg ccc act ggc cag gac tgg aat cac acc ccc cag aag aca gac				1269
Val Met Pro Thr Gly Gln Asp Trp Asn His Thr Pro Gln Lys Thr Asp	375	380	385	
cat cca tct gcc ctg ctc aga gac ccc ccg gag cca ggc tct ccc agg				1317
His Pro Ser Ala Leu Leu Arg Asp Pro Pro Glu Pro Gly Ser Pro Arg	390	395	400	
atc tca tca ctg cgc ccc cag gcc ctc agc aac ccc tcc acc ctc tct				1365
Ile Ser Ser Leu Arg Pro Gln Ala Leu Ser Asn Pro Ser Thr Leu Ser	405	410	415	420
gct cag cca cag ctt tcc aga agc cac tcc tcg ggc agc gtg ctg ccc				1413
Ala Gln Pro Gln Leu Ser Arg Ser His Ser Ser Gly Ser Val Leu Pro	425	430	435	
ctt ggg gag ctg gag ggc agg agg agc acc agg gat cgg acg agc ccc				1461
Leu Gly Glu Leu Glu Gly Arg Arg Ser Thr Arg Asp Arg Thr Ser Pro	440	445	450	
gca gag cca gaa gca gca cca gca agt gaa ggg gca gcc agg ccc ctg				1509
Ala Glu Pro Glu Ala Ala Pro Ala Ser Glu Gly Ala Ala Arg Pro Leu	455	460	465	
ccc cgt ttt aac tcc gtt cct ttg act gac aca ggc cat gag agg cag				1557
Pro Arg Phe Asn Ser Val Pro Leu Thr Asp Thr Gly His Glu Arg Gln	470	475	480	
tcc gag gga tcc tcc agc ccg cag ctc cag gag tct gtc ttc cac ctg				1605
Ser Glu Gly Ser Ser Ser Pro Gln Leu Gln Glu Ser Val Phe His Leu	485	490	495	500
ctg gtg ccc agt gtc atc ctg gtc ttg ctg gct gtc gga ggc ctc ttg				1653
Leu Val Pro Ser Val Ile Leu Val Leu Leu Ala Val Gly Gly Leu Leu	505	510	515	
ttc tac agg tgg agg cgg cgg agc cat caa gag cct cag aga gcg gat				1701
Phe Tyr Arg Trp Arg Arg Arg Ser His Gln Glu Pro Gln Arg Ala Asp	520	525	530	
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Ser Pro Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr Gln Asp Asp Arg	535	540	545	

cag gtg gaa ctg cca gtg tagaggggaat tctaagctgg acgcacagaa 1797
 Gln Val Glu Leu Pro Val
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cga gtg gca ctg ctg ctc ctg ctc ctg gta gcc gct ggc cgg cgc gca 96
Arg Val Ala Leu Leu Leu Leu Leu Leu Val Ala Ala Gly Arg Arg Ala
20 25 30

gca gga gcg tcc gtg gcc act gaa ctg cgc tgc cag tgc ttg cag acc 144
Ala Gly Ala Ser Val Ala Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr
35 40 45

ctg cag gga att cac ccc aag aac atc caa agt gtg aac gtg aag tcc 192
Leu Gln Gly Ile His Pro Lys Asn Ile Gln Ser Val Asn Val Lys Ser
50 55 60

ccc gga ccc cac tgc gcc caa acc gaa gtc ata gcc aca ctc aag aat 240
Pro Gly Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn
65 70 75 80

```

ggg cgg aaa gct tgc ctc aat cct gca tcc ccc ata gtt aag aaa atc 288
 Gly Arg Lys Ala Cys Leu Asn Pro Ala Ser Pro Ile Val Lys Lys Ile
 85 90 95

atc gaa aag atg ctg aac agt gac aaa tcc aac tgaccagaag ggaggaggaa 341
 Ile Glu Lys Met Leu Asn Ser Asp Lys Ser Asn
 100 105

gctcactggt ggctgttcct gaaggaggcc ctgcccttat aggaacagaa gaggaaagag 401
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 actgtgatag aggctggcgg atccaagcaa atggccaatg agatcattgt gaaggcaggg 761
 gaatgtatgt gcacatctgt tttgtaactg tttagatgaa tgtcagttgt tatttattga 821
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 <223> a, c, t, g, other or unknown

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		Met Ala His Ala Thr Leu Ser Ala Ala Pro Ser					
		1 5 10					
aat ccc cgg ctc ctg cgg gtg gcg ctg ctg ctc ctg ctc ctg gtg ggc	158						
Asn Pro Arg Leu Leu Arg Val Ala Leu Leu Leu Leu Leu Val Gly							
	15 20 25						
agc cgg cgc gca gca gga gcg tcc gtg gtc act gaa ctg cgc tgc cag	206						
Ser Arg Arg Ala Ala Gly Ala Ser Val Val Thr Glu Leu Arg Cys Gln							
	30 35 40						
tgc ttg cag aca ctg cag gga att cac ctc aag aac atc caa agt gtg	254						
Cys Leu Gln Thr Leu Gln Gly Ile His Leu Lys Asn Ile Gln Ser Val							
	45 50 55						
aat gta agg tcc ccc gga ccc cac tgc gcc caa acc gaa gtc ata gcc	302						
Asn Val Arg Ser Pro Gly Pro His Cys Ala Gln Thr Glu Val Ile Ala							
	60 65 70 75						
aca ctc aag aat ggg aag aaa gct tgt ctc aac ccc gca tcc ccc atg	350						
Thr Leu Lys Asn Gly Lys Lys Ala Cys Leu Asn Pro Ala Ser Pro Met							
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gtt cag aaa atc atc gaa aag ata ctg aac aag ggg agc acc aac	395						
Val Gln Lys Ile Ile Glu Lys Ile Leu Asn Lys Gly Ser Thr Asn							
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tc	ccttgga	aagagaattt	atcattactg	ttacatttgt	acaaatgaca	tgataataaa	1055
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Val Tyr Gly Leu Arg Ser Lys Ser Lys Lys Phe Arg Arg Pro Asp Ile	
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Gln Tyr Pro Asp Ala Thr Asp Glu Asp Ile Thr Ser His Met Glu Ser	
170 175 180	
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Glu Glu Leu Asn Gly Ala Tyr Lys Ala Ile Pro Val Ala Gln Asp Leu	
185 190 195	
aac gcg cct tct gat tgg gac agc cgt ggg aag gac agt tat gaa acg	740
Asn Ala Pro Ser Asp Trp Asp Ser Arg Gly Lys Asp Ser Tyr Glu Thr	
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Ser Gln Leu Asp Asp Gln Ser Ala Glu Thr His Ser His Lys Gln Ser	
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Arg Leu Tyr Lys Arg Lys Ala Asn Asp Glu Ser Asn Glu His Ser Asp	
230 235 240 245	
gtg att gat agt cag gaa ctt tcc aaa gtc agc cgt gaa ttc cac agc	884
Val Ile Asp Ser Gln Glu Leu Ser Lys Val Ser Arg Glu Phe His Ser	
250 255 260	
cat gaa ttt cac agc cat gaa gat atg ctg gtt gta gac ccc aaa agt	932
His Glu Phe His Ser His Glu Asp Met Leu Val Val Asp Pro Lys Ser	
265 270 275	
aag gaa gaa gat aaa cac ctg aaa ttt cgt att tct cat gaa tta gat	980
Lys Glu Glu Asp Lys His Leu Lys Phe Arg Ile Ser His Glu Leu Asp	
280 285 290	
agt gca tct tct gag gtc aat taaaaggaga aaaaatacaa tttctcactt	1031
Ser Ala Ser Ser Glu Val Asn	
295 300	
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			1				5									
gtg	gaa	acc	atc	cgc	cgc	gcg	tac	ccc	gat	gcc	aac	ctc	ctc	aac	gac	219
Val	Glu	Thr	Ile	Arg	Arg	Ala	Tyr	Pro	Asp	Ala	Asn	Leu	Leu	Asn	Asp	
10						15				20					25	
cgg	gtg	ctg	cgg	gcc	atg	ctg	aag	gcg	gag	gag	acc	tgc	gcg	ccc	tcg	267
Arg	Val	Leu	Arg	Ala	Met	Leu	Lys	Ala	Glu	Glu	Thr	Cys	Ala	Pro	Ser	
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Val	Ser	Tyr	Phe	Lys	Cys	Val	Gln	Lys	Glu	Val	Leu	Pro	Ser	Met	Arg	
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Lys	Ile	Val	Ala	Thr	Trp	Met	Leu	Glu	Val	Cys	Glu	Glu	Gln	Lys	Cys	
		60					65					70				
gag	gag	gag	gtc	ttc	ccg	ctg	gcc	atg	aac	tac	ctg	gac	cgc	ttc	ctg	411
Glu	Glu	Glu	Val	Phe	Pro	Leu	Ala	Met	Asn	Tyr	Leu	Asp	Arg	Phe	Leu	
		75					80					85				
tcg	ctg	gag	ccc	gtg	aaa	aag	agc	cgc	ctg	cag	ctg	ctg	ggg	gcc	act	459
Ser	Leu	Glu	Pro	Val	Lys	Lys	Ser	Arg	Leu	Gln	Leu	Leu	Gly	Ala	Thr	
90					95					100					105	
tgc	atg	ttc	gtg	gcc	tct	aag	atg	aag	gag	acc	atc	ccc	ctg	acg	gcc	507
Cys	Met	Phe	Val	Ala	Ser	Lys	Met	Lys	Glu	Thr	Ile	Pro	Leu	Thr	Ala	
				110					115					120		
gag	aag	ctg	tgc	atc	tac	acc	gac	ggc	tcc	atc	cgg	ccc	gag	gag	ctg	555
Glu	Lys	Leu	Cys	Ile	Tyr	Thr	Asp	Gly	Ser	Ile	Arg	Pro	Glu	Glu	Leu	
		125						130					135			

ctg	caa	atg	gag	ctg	ctc	ctg	gtg	aac	aag	ctc	aag	tgg	aac	ctg	gcc	603
Leu	Gln	Met	Glu	Leu	Leu	Leu	Val	Asn	Lys	Leu	Lys	Trp	Asn	Leu	Ala	
		140					145					150				
gca	atg	acc	ccg	cac	gat	ttc	att	gaa	cac	ttc	ctc	tcc	aaa	atg	cca	651
Ala	Met	Thr	Pro	His	Asp	Phe	Ile	Glu	His	Phe	Leu	Ser	Lys	Met	Pro	
	155					160					165					
gag	gcg	gag	gag	aac	aaa	cag	atc	atc	cgc	aaa	cac	gcg	cag	acc	ttc	699
Glu	Ala	Glu	Glu	Asn	Lys	Gln	Ile	Ile	Arg	Lys	His	Ala	Gln	Thr	Phe	
170					175					180					185	
gtt	gcc	tct	tgt	gcc	aca	gat	gtg	aag	ttc	att	tcc	aat	ccg	ccc	tcc	747
Val	Ala	Ser	Cys	Ala	Thr	Asp	Val	Lys	Phe	Ile	Ser	Asn	Pro	Pro	Ser	
				190					195					200		
atg	gtg	gca	gcg	ggg	agc	gtg	gtg	gcc	gca	gtg	caa	ggc	ctg	aac	ctg	795
Met	Val	Ala	Ala	Gly	Ser	Val	Val	Ala	Ala	Val	Gln	Gly	Leu	Asn	Leu	
		205						210					215			
agg	agc	ccc	aac	aac	ttc	ctg	tcc	tac	tac	cgc	ctc	aca	cgc	ttc	ctc	843
Arg	Ser	Pro	Asn	Asn	Phe	Leu	Ser	Tyr	Tyr	Arg	Leu	Thr	Arg	Phe	Leu	
		220				225						230				
tcc	aga	gtg	atc	aag	tgt	gac	cca	gac	tgc	ctc	cgg	gcc	tgc	cag	gag	891
Ser	Arg	Val	Ile	Lys	Cys	Asp	Pro	Asp	Cys	Leu	Arg	Ala	Cys	Gln	Glu	
	235					240					245					
cag	atc	gaa	gcc	ctg	ctg	gag	tca	agc	ctg	cgc	cag	gcc	cag	cag	aac	939
Gln	Ile	Glu	Ala	Leu	Leu	Glu	Ser	Ser	Leu	Arg	Gln	Ala	Gln	Gln	Asn	
250					255					260					265	
atg	gac	ccc	aag	gcc	gcc	gag	gag	gag	gaa	gag	gag	gag	gag	gag	gtg	987
Met	Asp	Pro	Lys	Ala	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Val	
				270				275						280		
gac	ctg	gct	tgc	aca	ccc	acc	gac	gtg	cgg	gac	gtg	gac	atc			1029
Asp	Leu	Ala	Cys	Thr	Pro	Thr	Asp	Val	Arg	Asp	Val	Asp	Ile			
			285					290					295			
tgagggggccc aggcaggcgg gcgccaccgc caccgcgagc gagggcggag ccggccccag																1089
gtgctccaca tgacagtccc tctctccgg agcatttttga taccagaagg gaaagcttca																1149
ttctccttgt tgttggttgt ttttctctt gctctttccc ccttccatct ctgacttaag																1209
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<210> 11

<211> 2121

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (559)..(1875)

<400> 11

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ataaaagccg gttttcgggg ctttatctaa ctcgctgtag taattccagc gagaggcaga 180
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cgtcctggga agggagatcc ggagcgaata gggggcttcg cctctggccc agccctcccg 300
cttgatcccc caggccagcg gtccgcaacc cttgccgcat ccacgaaact ttgccatag 360
cagcggggcgg gcactttgca ctggaactta caacaccoga gcaaggacgc gactctcccg 420
acgcgggggag gctattctgc ccatttgggg acacttcccc gccgctgcca ggaccgctt 480
ctctgaaagg ctctccttgc agctgcttag acgctggatt tttttcgggt agtggaaaac 540

cagcagcctc ccgcgacg atg ccc ctc aac gtt agc ttc acc aac agg aac 591
                Met Pro Leu Asn Val Ser Phe Thr Asn Arg Asn
                  1                5                10

tat gac ctc gac tac gac tcg gtg cag ccg tat ttc tac tgc gac gag 639
Tyr Asp Leu Asp Tyr Asp Ser Val Gln Pro Tyr Phe Tyr Cys Asp Glu
                15                20                25

gag gag aac ttc tac cag cag cag cag cag agc gag ctg cag ccc ccg 687
Glu Glu Asn Phe Tyr Gln Gln Gln Gln Gln Ser Glu Leu Gln Pro Pro
                30                35                40

gcg ccc agc gag gat atc tgg aag aaa ttc gag ctg ctg ccc acc ccg 735
Ala Pro Ser Glu Asp Ile Trp Lys Lys Phe Glu Leu Leu Pro Thr Pro
                45                50                55

ccc ctg tcc cct agc cgc cgc tcc ggg ctc tgc tcg ccc tcc tac gtt 783
Pro Leu Ser Pro Ser Arg Arg Ser Gly Leu Cys Ser Pro Ser Tyr Val
                60                65                70                75

gcg gtc aca ccc ttc tcc ctt cgg gga gac aac gac ggc ggt ggc ggg 831
Ala Val Thr Pro Phe Ser Leu Arg Gly Asp Asn Asp Gly Gly Gly Gly
                80                85                90

agc ttc tcc acg gcc gac cag ctg gag atg gtg acc gag ctg ctg gga 879
Ser Phe Ser Thr Ala Asp Gln Leu Glu Met Val Thr Glu Leu Leu Gly
                95                100                105

gga gac atg gtg aac cag agt ttc atc tgc gac ccg gac gac gag acc 927
Gly Asp Met Val Asn Gln Ser Phe Ile Cys Asp Pro Asp Asp Glu Thr

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110				115				120								
ttc	atc	aaa	aac	atc	atc	atc	cag	gac	tgt	atg	tgg	agc	ggc	ttc	tcg	975
Phe	Ile	Lys	Asn	Ile	Ile	Ile	Gln	Asp	Cys	Met	Trp	Ser	Gly	Phe	Ser	
125				130				135								
gcc	gcc	gcc	aag	ctc	gtc	tca	gag	aag	ctg	gcc	tcc	tac	cag	gct	gcg	1023
Ala	Ala	Ala	Lys	Leu	Val	Ser	Glu	Lys	Leu	Ala	Ser	Tyr	Gln	Ala	Ala	
140				145				150				155				
cgc	aaa	gac	agc	ggc	agc	ccg	aac	ccc	gcc	cgc	ggc	cac	agc	gtc	tgc	1071
Arg	Lys	Asp	Ser	Gly	Ser	Pro	Asn	Pro	Ala	Arg	Gly	His	Ser	Val	Cys	
				160				165				170				
tcc	acc	tcc	agc	ttg	tac	ctg	cag	gat	ctg	agc	gcc	gcc	gcc	tca	gag	1119
Ser	Thr	Ser	Ser	Leu	Tyr	Leu	Gln	Asp	Leu	Ser	Ala	Ala	Ala	Ser	Glu	
				175				180				185				
tgc	atc	gac	ccc	tcg	gtg	gtc	ttc	ccc	tac	cct	ctc	aac	gac	agc	agc	1167
Cys	Ile	Asp	Pro	Ser	Val	Val	Phe	Pro	Tyr	Pro	Leu	Asn	Asp	Ser	Ser	
				190				195				200				
tcg	ccc	aag	tcc	tgc	gcc	tcg	caa	gac	tcc	agc	gcc	ttc	tct	ccg	tcc	1215
Ser	Pro	Lys	Ser	Cys	Ala	Ser	Gln	Asp	Ser	Ser	Ala	Phe	Ser	Pro	Ser	
				205				210				215				
tcg	gat	tct	ctg	ctc	tcc	tcg	acg	gag	tcc	tcc	ccg	cag	ggc	agc	ccc	1263
Ser	Asp	Ser	Leu	Leu	Ser	Ser	Thr	Glu	Ser	Ser	Pro	Gln	Gly	Ser	Pro	
				225				230				235				
gag	ccc	ctg	gtg	ctc	cat	gag	gag	aca	ccg	ccc	acc	acc	agc	agc	gac	1311
Glu	Pro	Leu	Val	Leu	His	Glu	Glu	Thr	Pro	Pro	Thr	Thr	Ser	Ser	Asp	
				240				245				250				
tct	gag	gag	gaa	caa	gaa	gat	gag	gaa	gaa	atc	gat	gtt	gtt	tct	gtg	1359
Ser	Glu	Glu	Glu	Gln	Glu	Asp	Glu	Glu	Glu	Ile	Asp	Val	Val	Ser	Val	
				255				260				265				
gaa	aag	agg	cag	gct	cct	ggc	aaa	agg	tca	gag	tct	gga	tca	cct	tct	1407
Glu	Lys	Arg	Gln	Ala	Pro	Gly	Lys	Arg	Ser	Glu	Ser	Gly	Ser	Pro	Ser	
				270				275				280				
gct	gga	ggc	cac	agc	aaa	cct	cct	cac	agc	cca	ctg	gtc	ctc	aag	agg	1455
Ala	Gly	Gly	His	Ser	Lys	Pro	Pro	His	Ser	Pro	Leu	Val	Leu	Lys	Arg	
				285				290				295				
tgc	cac	gtc	tcc	aca	cat	cag	cac	aac	tac	gca	gcg	cct	ccc	tcc	act	1503
Cys	His	Val	Ser	Thr	His	Gln	His	Asn	Tyr	Ala	Ala	Pro	Pro	Ser	Thr	
				305				310				315				
cgg	aag	gac	tat	cct	gct	gcc	aag	agg	gtc	aag	ttg	gac	agt	gtc	aga	1551
Arg	Lys	Asp	Tyr	Pro	Ala	Ala	Lys	Arg	Val	Lys	Leu	Asp	Ser	Val	Arg	
				320				325				330				

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gtc ctg aga cag atc agc aac aac cga aaa tgc acc agc ccc agg tcc 1599
Val Leu Arg Gln Ile Ser Asn Asn Arg Lys Cys Thr Ser Pro Arg Ser
      335                      340                      345

tcg gac acc gag gag aat gtc aag agg cga aca cac aac gtc ttg gag 1647
Ser Asp Thr Glu Glu Asn Val Lys Arg Arg Thr His Asn Val Leu Glu
      350                      355                      360

cgc cag agg agg aac gag cta aaa cgg agc ttt ttt gcc ctg cgt gac 1695
Arg Gln Arg Arg Asn Glu Leu Lys Arg Ser Phe Phe Ala Leu Arg Asp
      365                      370                      375

cag atc ccg gag ttg gaa aac aat gaa aag gcc ccc aag gta gtt atc 1743
Gln Ile Pro Glu Leu Glu Asn Asn Glu Lys Ala Pro Lys Val Val Ile
      380                      385                      390                      395

ctt aaa aaa gcc aca gca tac atc ctg tcc gtc caa gca gag gag caa 1791
Leu Lys Lys Ala Thr Ala Tyr Ile Leu Ser Val Gln Ala Glu Glu Gln
      400                      405                      410

aag ctc att tct gaa gag gac ttg ttg cgg aaa cga cga gaa cag ttg 1839
Lys Leu Ile Ser Glu Glu Asp Leu Leu Arg Lys Arg Arg Glu Gln Leu
      415                      420                      425

aaa cac aaa ctt gaa cag cta cgg aac tct tgt gcg taaggaaaag 1885
Lys His Lys Leu Glu Gln Leu Arg Asn Ser Cys Ala
      430                      435

taaggaaaac gattccttct aacagaaatg tcctgagcaa tcacctatga acttgtttca 1945
aatgcatgat caaatgcaac ctcaaacct tggctgagtc ttgagactga aagatttagc 2005
cataatgtaa actgcctcaa attggacttt gggcataaaa gaactttttt atgcttacca 2065
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<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (79)..(570)

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Met Ser Glu Pro Ala Gly Asp Val Arg Gln Asn
      1                      5                      10

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cca tgc ggc agc aag gcc tgc cgc cgc ctc ttc ggc cca gtg gac agc	159
Pro Cys Gly Ser Lys Ala Cys Arg Arg Leu Phe Gly Pro Val Asp Ser	
15 20 25	
gag cag ctg agc cgc gac tgt gat gcg cta atg gcg ggc tgc atc cag	207
Glu Gln Leu Ser Arg Asp Cys Asp Ala Leu Met Ala Gly Cys Ile Gln	
30 35 40	
gag gcc cgt gag cga tgg aac ttc gac ttt gtc acc gag aca cca ctg	255
Glu Ala Arg Glu Arg Trp Asn Phe Asp Phe Val Thr Glu Thr Pro Leu	
45 50 55	
gag ggt gac ttc gcc tgg gag cgt gtg cgg ggc ctt ggc ctg ccc aag	303
Glu Gly Asp Phe Ala Trp Glu Arg Val Arg Gly Leu Gly Leu Pro Lys	
60 65 70 75	
ctc tac ctt ccc acg ggg ccc cgg cga ggc cgg gat gag ttg gga gga	351
Leu Tyr Leu Pro Thr Gly Pro Arg Arg Gly Arg Asp Glu Leu Gly Gly	
80 85 90	
ggc agg cgg cct ggc acc tca cct gct ctg ctg cag ggg aca gca gag	399
Gly Arg Arg Pro Gly Thr Ser Pro Ala Leu Leu Gln Gly Thr Ala Glu	
95 100 105	
gaa gac cat gtg gac ctg tca ctg tct tgt acc ctt gtg cct cgc tca	447
Glu Asp His Val Asp Leu Ser Leu Ser Cys Thr Leu Val Pro Arg Ser	
110 115 120	
ggg gag cag gct gaa ggg tcc cca ggt gga cct gga gac tct cag ggt	495
Gly Glu Gln Ala Glu Gly Ser Pro Gly Gly Pro Gly Asp Ser Gln Gly	
125 130 135	
cga aaa cgg cgg cag acc agc atg aca gat ttc tac cac tcc aaa cgc	543
Arg Lys Arg Arg Gln Thr Ser Met Thr Asp Phe Tyr His Ser Lys Arg	
140 145 150 155	
cgg ctg atc ttc tcc aag agg aag ccc taatccgccc acaggaagcc	590
Arg Leu Ile Phe Ser Lys Arg Lys Pro	
160	
tgcagtcctg gaagcgcgag ggcctcaaag gcccgctcta catcttctgc cttagtctca	650
gtttgtgtgt cttaattatt atttgtgttt taatttaaac acctcctcat gtacataccc	710
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agctacttcc tcctccccac ttgtccgctg ggtggtagcc tctggagggg tgtggctcct	950
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2098

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<210> 13
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<213> Homo sapiens

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<222> (256) .. (570)

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gggttttcgt ggttcacatc tcgtgggttca cgggggagtg ggcagcgcca ggggcgcccg 180
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ctagaagacc aggtc atg atg atg ggc agc gcc cga gtg gcg gag ctg ctg 291
      Met Met Met Gly Ser Ala Arg Val Ala Glu Leu Leu
        1             5             10

ctg ctc cac ggc gcg gag ccc aac tgc gcc gac ccc gcc act ctc acc 339
Leu Leu His Gly Ala Glu Pro Asn Cys Ala Asp Pro Ala Thr Leu Thr
      15             20             25

cga ccc gtg cac gac gct gcc cgg gag ggc ttc ctg gac acg ctg gtg 387
Arg Pro Val His Asp Ala Ala Arg Glu Gly Phe Leu Asp Thr Leu Val
      30             35             40

gtg ctg cac cgg gcc ggg gcg cgg ctg gac gtg cgc gat gcc tgg ggc 435
Val Leu His Arg Ala Gly Ala Arg Leu Asp Val Arg Asp Ala Trp Gly
      45             50             55             60

cgt ctg ccc gtg gac ctg gct gag gag ctg ggc cat cgc gat gtc gca 483
Arg Leu Pro Val Asp Leu Ala Glu Glu Leu Gly His Arg Asp Val Ala
      65             70             75

cgg tac ctg cgc gcg gct gcg ggg ggc acc aga ggc agt aac cat gcc 531
Arg Tyr Leu Arg Ala Ala Ala Gly Gly Thr Arg Gly Ser Asn His Ala
      80             85             90

cgc ata gat gcc gcg gaa ggt ccc tca gac atc ccc gat tgaaagaacc 580
Arg Ile Asp Ala Ala Glu Gly Pro Ser Asp Ile Pro Asp
      95             100             105

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ccacaactgc ccccgccaca acccaccgctg ctttcgtagt tttcatttag aaaatagagc 700
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<210> 14
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<212> DNA
<213> Homo sapiens

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<220>
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<222> (163)..(681)

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gggcgcgctc	aggggaaggcg	ggtgcgcgcc	tgcggggcg	ag	atg ggc agg ggg Met Gly Arg Gly 1	174
cgg tgc gtg ggt ccc agt ctg cag tta agg ggg cag gag tgg cgc tgc Arg Cys Val Gly Pro Ser Leu Gln Leu Arg Gly Gln Glu Trp Arg Cys 5 10 15 20						222
tca cct ctg gtg cca aag ggc ggc gca gcg gct gcc gag ctc ggc cct Ser Pro Leu Val Pro Lys Gly Gly Ala Ala Ala Glu Leu Gly Pro 25 30 35						270
gga ggc ggc gag aac atg gtg cgc agg ttc ttg gtg acc ctc cgg att Gly Gly Gly Glu Asn Met Val Arg Arg Phe Leu Val Thr Leu Arg Ile 40 45 50						318
cgg cgc gcg tgc ggc ccg ccg cga gtg agg gtt ttc gtg gtt cac atc Arg Arg Ala Cys Gly Pro Pro Arg Val Arg Val Phe Val Val His Ile 55 60 65						366
ccg cgg ctc acg ggg gag tgg gca gcg cca ggg gcg ccc gcc gct gtg Pro Arg Leu Thr Gly Glu Trp Ala Ala Pro Gly Ala Pro Ala Ala Val 70 75 80						414
gcc ctc gtg ctg atg cta ctg agg agc cag cgt cta ggg cag cag ccg Ala Leu Val Leu Met Leu Leu Arg Ser Gln Arg Leu Gly Gln Gln Pro 85 90 95 100						462
ctt cct aga aga cca ggt cat gat gat ggg cag cgc ccg agt ggc gga Leu Pro Arg Arg Pro Gly His Asp Asp Gly Gln Arg Pro Ser Gly Gly 105 110 115						510
gct gct gct gct cca cgg cgc gga gcc caa ctg cgc cga ccc cgc cac Ala Ala Ala Ala Pro Arg Arg Gly Ala Gln Leu Arg Arg Pro Arg His 120 125 130						558
tct cac ccg acc cgt gca cga cgc tgc ccg gga ggg ctt cct gga cac Ser His Pro Thr Arg Ala Arg Arg Cys Pro Gly Gly Leu Pro Gly His 135 140 145						606
gct ggt ggt gct gca ccg ggc cgg ggc gcg gct gga cgt gcg cga tgc Ala Gly Gly Ala Ala Pro Gly Arg Gly Ala Ala Gly Arg Ala Arg Cys 150 155 160						654
ctg ggg ccg tct gcc cgt gga cct ggc tgaggagctg ggccatcgcg Leu Gly Pro Ser Ala Arg Gly Pro Gly 165 170						701
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ccacaaccca	ccccgctttc	gtagttttca	tttagaaaat	agagctttta	aaaatgtcct	941
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ttatatattc	ttataaaaat	gtaaaaaaga	aaaacaccgc	ttctgccttt	tcactgtggt	1061
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<210> 15
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<212> DNA
<213> Homo sapiens
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<222> (213) .. (1616)
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Gly Phe Ala Asn Leu Asp Leu Asn Asp Gln Val Thr Leu Leu Lys Tyr	
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395 400 405

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410 415 420

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Trp His Ala Ala Trp Gly Leu Cys Leu Val Pro Leu Ser Leu Ala Gln
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Ile Asp Leu Asn Ile Thr Cys Arg Phe Ala Gly Val Phe His Val Glu
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Lys Asn Gly Arg Tyr Ser Ile Ser Arg Thr Glu Ala Ala Asp Leu Cys
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Glu	Leu	Glu	Glu	Leu	Tyr	Gly	Asp	Ile	Asp	Ala	Leu	Glu	Phe	Tyr	Pro	
380					385					390					395	
gga	ctg	ctt	ctt	gaa	aag	tgc	cat	cca	aac	tct	atc	ttt	ggg	gag	agt	1553
Gly	Leu	Leu	Leu	Glu	Lys	Cys	His	Pro	Asn	Ser	Ile	Phe	Gly	Glu	Ser	
				400					405					410		
atg	ata	gag	att	ggg	gct	ccc	ttt	tcc	ctc	aag	ggg	ctc	cta	ggg	aat	1601
Met	Ile	Glu	Ile	Gly	Ala	Pro	Phe	Ser	Leu	Lys	Gly	Leu	Leu	Gly	Asn	

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ccc atc tgt tct ccg gag tac	tgg aag ccg agc aca ttt ggc ggc gag	1649	
Pro Ile Cys Ser Pro Glu Tyr	Trp Lys Pro Ser Thr Phe Gly Gly Glu		
430	435	440	
gtg ggc ttt aac att gtc aag acg gcc aca ctg aag aag ctg gtc tgc	1697		
Val Gly Phe Asn Ile Val Lys Thr Ala Thr Leu Lys Lys Leu Val Cys			
445	450	455	
ctc aac acc aag acc tgt ccc tac gtt tcc ttc cgt gtg ccg gat gcc	1745		
Leu Asn Thr Lys Thr Cys Pro Tyr Val Ser Phe Arg Val Pro Asp Ala			
460	465	470	475
agt cag gat gat ggg cct gct gtg gag cga cca tcc aca gag	1787		
Ser Gln Asp Asp Gly Pro Ala Val Glu Arg Pro Ser Thr Glu			
480	485		
ctctgagggg caggaaagca gcattctgga ggggagagct ttgtgcttgt cattccagag	1847		
tgctgaggcc agggctgatg gtcttaaagt ctcattttct ggtttgccat ggtgagtgtt	1907		
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ctcagcgccc agcaccgccc ctcccggcaa cccggagcgc gcaccgcagc cggcggccga 180
gctcgcgcat cccagccatc actcttccac ctgctcctta gagaagggaa g atg agt 237
                                     Met Ser
                                     1
gag tcg agc tcg aag tcc agc cag ccc ttg gcc tcc aag cag gaa aag 285
Glu Ser Ser Ser Lys Ser Ser Gln Pro Leu Ala Ser Lys Gln Glu Lys
      5                      10                      15
gac ggc act gag aag cgg ggc cgg ggc agg ccg cgc aag cag cct ccg 333
Asp Gly Thr Glu Lys Arg Gly Arg Gly Arg Pro Arg Lys Gln Pro Pro
      20                      25                      30
aag gag ccc agc gaa gtg cca aca cct aag aga cct cgg ggc cga cca 381
Lys Glu Pro Ser Glu Val Pro Thr Pro Lys Arg Pro Arg Gly Arg Pro
      35                      40                      45                      50
aag gga agc aaa aac aag ggt gct gcc aag acc cgg aaa acc acc aca 429
Lys Gly Ser Lys Asn Lys Gly Ala Ala Lys Thr Arg Lys Thr Thr Thr
      55                      60                      65
act cca gga agg aaa cca agg ggc aga ccc aaa aaa ctg gag aag gag 477
Thr Pro Gly Arg Lys Pro Arg Gly Arg Pro Lys Lys Leu Glu Lys Glu
      70                      75                      80
gaa gag gag ggc atc tcg cag gag tcc tcg gag gag gag gag 519
Glu Glu Glu Gly Ile Ser Gln Glu Ser Ser Glu Glu Glu Gln
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tgacccatgc gtgccgcctg ctctcactg gaggagcagc ttccttctgg gactggacag 579
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gccgccaccc ccattctcca cctgtgccct caccaccaca ctacacagca caccagccgc 699
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<212> DNA
<213> Homo sapiens

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                               Met Ala His Lys Gln Ile
                               1           5

tac tac tcg gac aag tac ttc gac gaa cac tac gag tac cgg cat gtt 161
Tyr Tyr Ser Asp Lys Tyr Phe Asp Glu His Tyr Glu Tyr Arg His Val
                10                15                20

atg tta ccc aga gaa ctt tcc aaa caa gta cct aaa act cat ctg atg 209
Met Leu Pro Arg Glu Leu Ser Lys Gln Val Pro Lys Thr His Leu Met
                25                30                35

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tct gaa gag gag tgg agg aga ctt ggt gtc caa cag agt cta ggc tgg 257
 Ser Glu Glu Glu Trp Arg Arg Leu Gly Val Gln Gln Ser Leu Gly Trp
 40 45 50

gtt cat tac atg att cat gag cca gaa cca cat att ctt ctc ttt aga 305
 Val His Tyr Met Ile His Glu Pro Glu Pro His Ile Leu Leu Phe Arg
 55 60 65 70

cga cct ctt cca aaa gat caa caa aaa tgaagtttat ctgggggatcg 352
 Arg Pro Leu Pro Lys Asp Gln Gln Lys
 75

tcaaattcttt ttcaaattta atgtatatgt gtatataagg tagtattcag tgaataacttg 412
 agaaatgtac aaatctttca tccataacctg tgcattgagct gtattcttca cagcaacaga 472
 gctcagttaa atgcaactgc aagtaggtta ctgtaagatg tttaagataa aagttcttcc 532
 agtcagtttt tctcttaagt gctgtttga gtttactgaa acagtttact tttgttcaat 592
 aaagtttgta tgttgcattt aaaaaaaaaa aaaa 626

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 accaacaccg acacccacat tgacacctcc agtcgggcca gccgctccac tcgttgccctt 180
 tgcattctcca cacatggcgt cctcgcgag agcggcggct cctccggggg accgcgggtc 240
 cccaccgtgc agcggggcat catcaag atg gtc ctc tca ggg tgc gcc atc att 294
 Met Val Leu Ser Gly Cys Ala Ile Ile
 1 5

gtc cga ggt cag cct cgt ggt ggg cct cct cct gag cgg cag atc aac 342
 Val Arg Gly Gln Pro Arg Gly Gly Pro Pro Pro Glu Arg Gln Ile Asn
 10 15 20 25

ctc agc aac att cgt gct gga aat ctt gct cgc cgg gca gcc gcc aca 390
 Leu Ser Asn Ile Arg Ala Gly Asn Leu Ala Arg Arg Ala Ala Ala Thr
 30 35 40

caa cct gat gca aag gat acc cct gat gag ccc tgg gca ttt cca gct	438
Gln Pro Asp Ala Lys Asp Thr Pro Asp Glu Pro Trp Ala Phe Pro Ala	
45 50 55	
cga gag ttc ctt cga aag aag ctg att ggg aag gaa gtc tgt ttc acg	486
Arg Glu Phe Leu Arg Lys Lys Leu Ile Gly Lys Glu Val Cys Phe Thr	
60 65 70	
ata gaa aac aag act ccc cag ggg cga gag tat ggc atg atc tac ctt	534
Ile Glu Asn Lys Thr Pro Gln Gly Arg Glu Tyr Gly Met Ile Tyr Leu	
75 80 85	
gga aaa gat acc aat ggg gaa aac att gca gaa tca ctg gtt gca gag	582
Gly Lys Asp Thr Asn Gly Glu Asn Ile Ala Glu Ser Leu Val Ala Glu	
90 95 100 105	
ggc tta gcc acc cgg aga gaa ggc atg aga gct aat aat cct gag cag	630
Gly Leu Ala Thr Arg Arg Glu Gly Met Arg Ala Asn Asn Pro Glu Gln	
110 115 120	
aac cgg ctt tca gaa tgt gaa gaa caa gca aag gca gcc aag aaa ggg	678
Asn Arg Leu Ser Glu Cys Glu Glu Gln Ala Lys Ala Ala Lys Lys Gly	
125 130 135	
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Met Trp Ser Glu Gly Asn Gly Ser His Thr Ile Arg Asp Leu Lys Tyr	
140 145 150	
acc att gaa aac cca agg cac ttt gtg gac tca cac cac cag aag cct	774
Thr Ile Glu Asn Pro Arg His Phe Val Asp Ser His His Gln Lys Pro	
155 160 165	
gtt aat gct atc atc gag cat gtg cgg gac ggc agt gtg gtc agg gcc	822
Val Asn Ala Ile Ile Glu His Val Arg Asp Gly Ser Val Val Arg Ala	
170 175 180 185	
ctg ctc ctc cca gat tac tac ctg gtt aca gtc atg ctg tca ggc atc	870
Leu Leu Leu Pro Asp Tyr Tyr Leu Val Thr Val Met Leu Ser Gly Ile	
190 195 200	
aag tgc cca act ttt cga cgg gaa gca gat ggc agt gaa act cca gag	918
Lys Cys Pro Thr Phe Arg Arg Glu Ala Asp Gly Ser Glu Thr Pro Glu	
205 210 215	
cct ttt gct gca gaa gcc aaa ttt ttc act gag tcg cga ctg ctt cag	966
Pro Phe Ala Ala Glu Ala Lys Phe Phe Thr Glu Ser Arg Leu Leu Gln	
220 225 230	
aga gat gtt cag atc att ctg gag agc tgc cac aac cag aac att gtg	1014
Arg Asp Val Gln Ile Ile Leu Glu Ser Cys His Asn Gln Asn Ile Val	
235 240 245	
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Gly Thr Ile Leu His Pro Asn Gly Asn Ile Thr Glu Leu Leu Leu Lys	

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ggc Gly	gca Ala	gaa Glu	aag Lys 285	ctg Leu	agg Arg	gcg Ala	gca Ala	gag Glu 290	agg Arg	ttt Phe	gcc Ala	aaa Lys	gag Glu 295	cgc Arg	agg Arg	1158				
ctg Leu	aga Arg	ata Ile 300	tgg Trp	aga Arg	gac Asp	tat Tyr	gtg Val 305	gct Ala	ccc Pro	aca Thr	gct Ala	aat Asn 310	ttg Leu	gac Asp	caa Gln	1206				
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gcc Ala 330	att Ile	gtt Val	gtg Val	aag Lys 335	ctg Leu	aac Asn	tca Ser	ggc Gly	gat Asp	tac Tyr 340	aag Lys	acg Thr	att Ile	cac His	ctg Leu 345	1302				
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aac Asn	aag Lys	aaa Lys	ctg Leu 365	cgt Arg	ccc Pro	ctg Leu	tat Tyr	gac Asp 370	att Ile	cct Pro	tac Tyr	atg Met	ttt Phe 375	gag Glu	gcc Ala	1398				
cgg Arg	gaa Glu	ttt Phe 380	ctt Leu	cga Arg	aaa Lys	aag Lys	ctt Leu 385	att Ile	ggg Gly	aag Lys	aag Lys	gtc Val 390	aat Asn	gtg Val	acg Thr	1446				
gtg Val	gac Asp 395	tac Tyr	att Ile	aga Arg	cca Pro	gcc Ala 400	agc Ser	cca Pro	gcc Ala	aca Thr	gag Glu 405	aca Thr	gtg Val	cct Pro	gcc Ala	1494				
ttt Phe 410	tca Ser	gag Glu	cgt Arg	acc Thr	tgt Cys 415	gcc Ala	act Thr	gtc Val	acc Thr	att Ile 420	gga Gly	gga Gly	ata Ile	aac Asn	att Ile 425	1542				
gct Ala	gag Glu	gct Ala	ctt Leu	gtc Val 430	agc Ser	aaa Lys	ggg Gly	cta Leu	gcc Ala 435	aca Thr	gtg Val	atc Ile	aga Arg	tac Tyr 440	cgg Arg	1590				
cag Gln	gat Asp	gat Asp	gac Asp 445	cag Gln	aga Arg	tca Ser	tca Ser	cac His 450	tac Tyr	gat Asp	gaa Glu	ctg Leu	ctt Leu 455	gct Ala	gca Ala	1638				
gag Glu	gcc Ala	aga Arg 460	gct Ala	att Ile	aag Lys	aat Asn	ggc Gly 465	aaa Lys	gga Gly	ttg Leu	cat His 470	agc Ser	aag Lys	aag Lys	gaa Glu	1686				

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Val	Pro	Ile	His	Arg	Val	Ala	Asp	Ile	Ser	Gly	Asp	Thr	Gln	Lys	Ala	
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Lys	Gln	Phe	Leu	Pro	Phe	Leu	Gln	Arg	Ala	Gly	Arg	Ser	Glu	Ala	Val	
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Val	Glu	Tyr	Val	Phe	Ser	Gly	Ser	Arg	Leu	Lys	Leu	Tyr	Leu	Pro	Lys	
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Glu	Thr	Cys	Leu	Ile	Thr	Phe	Leu	Leu	Ala	Gly	Ile	Glu	Cys	Pro	Arg	
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Gly	Ala	Arg	Asn	Leu	Pro	Gly	Leu	Val	Gln	Glu	Gly	Glu	Pro	Phe	Ser	
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Leu	His	Ile	Asp	Gly	Ala	Asn	Leu	Ser	Val	Leu	Leu	Val	Glu	His	Ala	
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Leu	Ser	Lys	Val	His	Phe	Thr	Ala	Glu	Arg	Ser	Ser	Tyr	Tyr	Lys	Ser	
			605					610					615			
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Leu	Leu	Ser	Ala	Glu	Glu	Ala	Ala	Lys	Gln	Lys	Lys	Glu	Lys	Val	Trp	
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gcc	cac	tat	gag	gag	cag	ccc	gtg	gag	gag	gtg	atg	cca	gtg	ctg	gag	2214
Ala	His	Tyr	Glu	Glu	Gln	Pro	Val	Glu	Glu	Val	Met	Pro	Val	Leu	Glu	
	635					640					645					
gag	aag	gag	cga	tct	gct	agc	tac	aag	ccc	gtg	ttt	gtg	acc	gag	atc	2262
Glu	Lys	Glu	Arg	Ser	Ala	Ser	Tyr	Lys	Pro	Val	Phe	Val	Thr	Glu	Ile	
	650				655					660					665	
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Thr	Asp	Asp	Leu	His	Phe	Tyr	Val	Gln	Asp	Val	Glu	Thr	Gly	Thr	Gln	
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Phe	Gln	Lys	Leu	Met	Glu	Asn	Met	Arg	Asn	Asp	Ile	Ala	Ser	His	Pro	

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 Glu Ile Met
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Leu	Phe	Leu	Lys	Pro	Thr	Pro	Asn	Thr	Val	His	Tyr	Ile	Leu	Thr	His	
65					70					75					80	
Phe	Lys	Gly	Phe	Trp	Asn	Val	Val	Asn	Asn	Ile	Pro	Phe	Leu	Arg	Asn	
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Ala	Ile	Met	Ser	Tyr	Val	Leu	Thr	Ser	Arg	Ser	His	Leu	Ile	Asp	Ser	
100					105					110						
Pro	Pro	Thr	Tyr	Asn	Ala	Asp	Tyr	Gly	Tyr	Lys	Ser	Trp	Glu	Ala	Phe	
115					120					125						
Ser	Asn	Leu	Ser	Tyr	Tyr	Thr	Arg	Ala	Leu	Pro	Pro	Val	Pro	Asp	Asp	
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165					170					175						
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Ala	Arg	Gln	Arg	Lys	Leu	Arg	Leu	Phe	Lys	Asp	Gly	Lys	Met	Lys	Tyr	
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Gln	Ile	Ile	Asp	Gly	Glu	Met	Tyr	Pro	Pro	Thr	Val	Lys	Asp	Thr	Gln	
245					250					255						
Ala	Glu	Met	Ile	Tyr	Pro	Pro	Gln	Val	Pro	Glu	His	Leu	Arg	Phe	Ala	
260					265					270						
Val	Gly	Gln	Glu	Val	Phe	Gly	Leu	Val	Pro	Gly	Leu	Met	Met	Tyr	Ala	
275					280					285						
Thr	Ile	Trp	Leu	Arg	Glu	His	Asn	Arg	Val	Cys	Asp	Val	Leu	Lys	Gln	
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305					310					315					320	
Ile	Leu	Ile	Gly	Glu	Thr	Ile	Lys	Ile	Val	Ile	Glu	Asp	Tyr	Val	Gln	

			325					330					335			
His	Leu	Ser	Gly	Tyr	His	Phe	Lys	Leu	Lys	Phe	Asp	Pro	Glu	Leu	Leu	
			340				345						350			
Phe	Asn	Lys	Gln	Phe	Gln	Tyr	Gln	Asn	Arg	Ile	Ala	Ala	Glu	Phe	Asn	
			355				360						365			
Thr	Leu	Tyr	His	Trp	His	Pro	Leu	Leu	Pro	Asp	Thr	Phe	Gln	Ile	His	
			370				375						380			
Asp	Gln	Lys	Tyr	Asn	Tyr	Gln	Gln	Phe	Ile	Tyr	Asn	Asn	Ser	Ile	Leu	
			385							395			400			
Leu	Glu	His	Gly	Ile	Thr	Gln	Phe	Val	Glu	Ser	Phe	Thr	Arg	Gln	Ile	
				405				410						415		
Ala	Gly	Arg	Val	Ala	Gly	Gly	Arg	Asn	Val	Pro	Pro	Ala	Val	Gln	Lys	
			420				425						430			
Val	Ser	Gln	Ala	Ser	Ile	Asp	Gln	Ser	Arg	Gln	Met	Lys	Tyr	Gln	Ser	
			435				440						445			
Phe	Asn	Glu	Tyr	Arg	Lys	Arg	Phe	Met	Leu	Lys	Pro	Tyr	Glu	Ser	Phe	
			450				455						460			
Glu	Glu	Leu	Thr	Gly	Glu	Lys	Glu	Met	Ser	Ala	Glu	Leu	Glu	Ala	Leu	
			465							475			480			
Tyr	Gly	Asp	Ile	Asp	Ala	Val	Glu	Leu	Tyr	Pro	Ala	Leu	Leu	Val	Glu	
				485				490						495		
Lys	Pro	Arg	Pro	Asp	Ala	Ile	Phe	Gly	Glu	Thr	Met	Val	Glu	Val	Gly	
			500				505						510			
Ala	Pro	Phe	Ser	Leu	Lys	Gly	Leu	Met	Gly	Asn	Val	Ile	Cys	Ser	Pro	
			515				520						525			
Ala	Tyr	Trp	Lys	Pro	Ser	Thr	Phe	Gly	Gly	Glu	Val	Gly	Phe	Gln	Ile	
			530				535						540			
Ile	Asn	Thr	Ala	Ser	Ile	Gln	Ser	Leu	Ile	Cys	Asn	Asn	Val	Lys	Gly	
			545				550			555			560			
Cys	Pro	Phe	Thr	Ser	Phe	Ser	Val	Pro	Asp	Pro	Glu	Leu	Ile	Lys	Thr	
				565				570						575		
Val	Thr	Ile	Asn	Ala	Ser	Ser	Ser	Arg	Ser	Gly	Leu	Asp	Asp	Ile	Asn	
			580				585						590			
Pro	Thr	Val	Leu	Leu	Lys	Glu	Arg	Ser	Thr	Glu	Leu					
			595				600									

<210> 25

<211> 360

<212> PRT

<213> Homo sapiens

<400> 25

Met	Glu	Asp	Phe	Asn	Met	Glu	Ser	Asp	Ser	Phe	Glu	Asp	Phe	Trp	Lys
1				5					10					15	

Gly	Glu	Asp	Leu	Ser	Asn	Tyr	Ser	Tyr	Ser	Ser	Thr	Leu	Pro	Pro	Phe
			20					25					30		

Leu	Leu	Asp	Ala	Ala	Pro	Cys	Glu	Pro	Glu	Ser	Leu	Glu	Ile	Asn	Lys
		35					40					45			

Tyr	Phe	Val	Val	Ile	Ile	Tyr	Ala	Leu	Val	Phe	Leu	Leu	Ser	Leu	Leu
	50					55					60				

Gly	Asn	Ser	Leu	Val	Met	Leu	Val	Ile	Leu	Tyr	Ser	Arg	Val	Gly	Arg
65					70					75					80

Ser	Val	Thr	Asp	Val	Tyr	Leu	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Leu	Leu
				85					90					95	

Phe	Ala	Leu	Thr	Leu	Pro	Ile	Trp	Ala	Ala	Ser	Lys	Val	Asn	Gly	Trp
			100					105					110		

Ile	Phe	Gly	Thr	Phe	Leu	Cys	Lys	Val	Val	Ser	Leu	Leu	Lys	Glu	Val
		115					120					125			

Asn	Phe	Tyr	Ser	Gly	Ile	Leu	Leu	Leu	Ala	Cys	Ile	Ser	Val	Asp	Arg
	130					135					140				

Tyr	Leu	Ala	Ile	Val	His	Ala	Thr	Arg	Thr	Leu	Thr	Gln	Lys	Arg	Tyr
145					150					155					160

Leu	Val	Lys	Phe	Ile	Cys	Leu	Ser	Ile	Trp	Gly	Leu	Ser	Leu	Leu	Leu
				165					170					175	

Ala	Leu	Pro	Val	Leu	Leu	Phe	Arg	Arg	Thr	Val	Tyr	Ser	Ser	Asn	Val
			180					185						190	

Ser	Pro	Ala	Cys	Tyr	Glu	Asp	Met	Gly	Asn	Asn	Thr	Ala	Asn	Trp	Arg
		195					200					205			

Met	Leu	Leu	Arg	Ile	Leu	Pro	Gln	Ser	Phe	Gly	Phe	Ile	Val	Pro	Leu
	210					215					220				

Leu	Ile	Met	Leu	Phe	Cys	Tyr	Gly	Phe	Thr	Leu	Arg	Thr	Leu	Phe	Lys
225					230					235					240

Ala	His	Met	Gly	Gln	Lys	His	Arg	Ala	Met	Arg	Val	Ile	Phe	Ala	Val
				245					250					255	

Val Leu Ile Phe Leu Leu Cys Trp Leu Pro Tyr Asn Leu Val Leu Leu
 260 265 270
 Ala Asp Thr Leu Met Arg Thr Gln Val Ile Gln Glu Thr Cys Glu Arg
 275 280 285
 Arg Asn His Ile Asp Arg Ala Leu Asp Ala Thr Glu Ile Leu Gly Ile
 290 295 300
 Leu His Ser Cys Leu Asn Pro Leu Ile Tyr Ala Phe Ile Gly Gln Lys
 305 310 315 320
 Phe Arg His Gly Leu Leu Lys Ile Leu Ala Ile His Gly Leu Ile Ser
 325 330 335
 Lys Asp Ser Leu Pro Lys Asp Ser Arg Pro Ser Phe Val Gly Ser Ser
 340 345 350
 Ser Gly His Thr Ser Thr Thr Leu
 355 360

<210> 26
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 26
 Met Pro Leu Gly Leu Leu Trp Leu Gly Leu Ala Leu Leu Gly Ala Leu
 1 5 10 15
 His Ala Gln Ala Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro
 20 25 30
 Leu Ser Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln
 35 40 45
 Gly Lys Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu
 50 55 60
 Asp Lys Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu
 65 70 75 80
 Asp Lys Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys
 85 90 95
 Asp Tyr Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe
 100 105 110
 Thr Leu Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val
 115 120 125

Arg Val Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys
 130 135 140

Lys Val Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg
 145 150 155 160

Thr Lys Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser
 165 170 175

Lys Tyr Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile
 180 185 190

Asp Gln Cys Ile Asp Gly
 195

<210> 27
 <211> 122
 <212> PRT
 <213> Homo sapiens

<400> 27
 Met Lys Leu Leu Thr Gly Leu Val Phe Cys Ser Leu Val Leu Gly Val
 1 5 10 15

Ser Ser Arg Ser Phe Phe Ser Phe Leu Gly Glu Ala Phe Asp Gly Ala
 20 25 30

Arg Asp Met Trp Arg Ala Tyr Ser Asp Met Arg Glu Ala Asn Tyr Ile
 35 40 45

Gly Ser Asp Lys Tyr Phe His Ala Arg Gly Asn Tyr Asp Ala Ala Lys
 50 55 60

Arg Gly Pro Gly Gly Val Trp Ala Ala Glu Ala Ile Ser Asp Ala Arg
 65 70 75 80

Glu Asn Ile Gln Arg Phe Phe Gly His Gly Ala Glu Asp Ser Leu Ala
 85 90 95

Asp Gln Ala Ala Asn Glu Trp Gly Arg Ser Gly Lys Asp Pro Asn His
 100 105 110

Phe Arg Pro Ala Gly Leu Pro Glu Lys Tyr
 115 120

<210> 28
 <211> 554
 <212> PRT
 <213> Homo sapiens

<400> 28

Met	Thr	Ala	Pro	Gly	Ala	Ala	Gly	Arg	Cys	Pro	Pro	Thr	Thr	Trp	Leu
1				5					10					15	
Gly	Ser	Leu	Leu	Leu	Leu	Val	Cys	Leu	Leu	Ala	Ser	Arg	Ser	Ile	Thr
		20					25					30			
Glu	Glu	Val	Ser	Glu	Tyr	Cys	Ser	His	Met	Ile	Gly	Ser	Gly	His	Leu
		35				40					45				
Gln	Ser	Leu	Gln	Arg	Leu	Ile	Asp	Ser	Gln	Met	Glu	Thr	Ser	Cys	Gln
	50					55					60				
Ile	Thr	Phe	Glu	Phe	Val	Asp	Gln	Glu	Gln	Leu	Lys	Asp	Pro	Val	Cys
65					70					75					80
Tyr	Leu	Lys	Lys	Ala	Phe	Leu	Leu	Val	Gln	Asp	Ile	Met	Glu	Asp	Thr
				85					90					95	
Met	Arg	Phe	Arg	Asp	Asn	Thr	Ala	Asn	Pro	Ile	Ala	Ile	Val	Gln	Leu
			100					105					110		
Gln	Glu	Leu	Ser	Leu	Arg	Leu	Lys	Ser	Cys	Phe	Thr	Lys	Asp	Tyr	Glu
		115					120					125			
Glu	His	Asp	Lys	Ala	Cys	Val	Arg	Thr	Phe	Tyr	Glu	Thr	Pro	Leu	Gln
	130					135					140				
Leu	Leu	Glu	Lys	Val	Lys	Asn	Val	Phe	Asn	Glu	Thr	Lys	Asn	Leu	Leu
145					150					155					160
Asp	Lys	Asp	Trp	Asn	Ile	Phe	Ser	Lys	Asn	Cys	Asn	Asn	Ser	Phe	Ala
				165					170					175	
Glu	Cys	Ser	Ser	Gln	Asp	Val	Val	Thr	Lys	Pro	Asp	Cys	Asn	Cys	Leu
			180					185					190		
Tyr	Pro	Lys	Ala	Ile	Pro	Ser	Ser	Asp	Pro	Ala	Ser	Val	Ser	Pro	His
		195					200					205			
Gln	Pro	Leu	Ala	Pro	Ser	Met	Ala	Pro	Val	Ala	Gly	Leu	Thr	Trp	Glu
	210					215					220				
Asp	Ser	Glu	Gly	Thr	Glu	Gly	Ser	Ser	Leu	Leu	Pro	Gly	Glu	Gln	Pro
225					230					235					240
Leu	His	Thr	Val	Asp	Pro	Gly	Ser	Ala	Lys	Gln	Arg	Pro	Pro	Arg	Ser
				245					250					255	
Thr	Cys	Gln	Ser	Phe	Glu	Pro	Pro	Glu	Thr	Pro	Val	Val	Lys	Asp	Ser
			260					265					270		
Thr	Ile	Gly	Gly	Ser	Pro	Gln	Pro	Arg	Pro	Ser	Val	Gly	Ala	Phe	Asn
		275					280					285			

Pro Gly Met Glu Asp Ile Leu Asp Ser Ala Met Gly Thr Asn Trp Val
 290 295 300
 Pro Glu Glu Ala Ser Gly Glu Ala Ser Glu Ile Pro Val Pro Gln Gly
 305 310 315 320
 Thr Glu Leu Ser Pro Ser Arg Pro Gly Gly Gly Ser Met Gln Thr Glu
 325 330 335
 Pro Ala Arg Pro Ser Asn Phe Leu Ser Ala Ser Ser Pro Leu Pro Ala
 340 345 350
 Ser Ala Lys Gly Gln Gln Pro Ala Asp Val Thr Ala Thr Ala Leu Pro
 355 360 365
 Arg Val Gly Pro Val Met Pro Thr Gly Gln Asp Trp Asn His Thr Pro
 370 375 380
 Gln Lys Thr Asp His Pro Ser Ala Leu Leu Arg Asp Pro Pro Glu Pro
 385 390 395 400
 Gly Ser Pro Arg Ile Ser Ser Leu Arg Pro Gln Ala Leu Ser Asn Pro
 405 410 415
 Ser Thr Leu Ser Ala Gln Pro Gln Leu Ser Arg Ser His Ser Ser Gly
 420 425 430
 Ser Val Leu Pro Leu Gly Glu Leu Glu Gly Arg Arg Ser Thr Arg Asp
 435 440 445
 Arg Thr Ser Pro Ala Glu Pro Glu Ala Ala Pro Ala Ser Glu Gly Ala
 450 455 460
 Ala Arg Pro Leu Pro Arg Phe Asn Ser Val Pro Leu Thr Asp Thr Gly
 465 470 475 480
 His Glu Arg Gln Ser Glu Gly Ser Ser Ser Pro Gln Leu Gln Glu Ser
 485 490 495
 Val Phe His Leu Leu Val Pro Ser Val Ile Leu Val Leu Leu Ala Val
 500 505 510
 Gly Gly Leu Leu Phe Tyr Arg Trp Arg Arg Arg Ser His Gln Glu Pro
 515 520 525
 Gln Arg Ala Asp Ser Pro Leu Glu Gln Pro Glu Gly Ser Pro Leu Thr
 530 535 540
 Gln Asp Asp Arg Gln Val Glu Leu Pro Val
 545 550

<210> 29
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400> 29
 Met Ala Arg Ala Ala Leu Ser Ala Ala Pro Ser Asn Pro Arg Leu Leu
 1 5 10 15
 Arg Val Ala Leu Leu Leu Leu Leu Val Ala Ala Gly Arg Arg Ala
 20 25 30
 Ala Gly Ala Ser Val Ala Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr
 35 40 45
 Leu Gln Gly Ile His Pro Lys Asn Ile Gln Ser Val Asn Val Lys Ser
 50 55 60
 Pro Gly Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn
 65 70 75 80
 Gly Arg Lys Ala Cys Leu Asn Pro Ala Ser Pro Ile Val Lys Lys Ile
 85 90 95
 Ile Glu Lys Met Leu Asn Ser Asp Lys Ser Asn
 100 105

<210> 30
 <211> 106
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Ala His Ala Thr Leu Ser Ala Ala Pro Ser Asn Pro Arg Leu Leu
 1 5 10 15
 Arg Val Ala Leu Leu Leu Leu Leu Val Gly Ser Arg Arg Ala Ala
 20 25 30
 Gly Ala Ser Val Val Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr Leu
 35 40 45
 Gln Gly Ile His Leu Lys Asn Ile Gln Ser Val Asn Val Arg Ser Pro
 50 55 60
 Gly Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn Gly
 65 70 75 80
 Lys Lys Ala Cys Leu Asn Pro Ala Ser Pro Met Val Gln Lys Ile Ile
 85 90 95
 Glu Lys Ile Leu Asn Lys Gly Ser Thr Asn

100

105

<210> 31
 <211> 300
 <212> PRT
 <213> Homo sapiens

<400> 31
 Met Arg Ile Ala Val Ile Cys Phe Cys Leu Leu Gly Ile Thr Cys Ala
 1 5 10 15
 Ile Pro Val Lys Gln Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Leu
 20 25 30
 Tyr Asn Lys Tyr Pro Asp Ala Val Ala Thr Trp Leu Asn Pro Asp Pro
 35 40 45
 Ser Gln Lys Gln Asn Leu Leu Ala Pro Gln Thr Leu Pro Ser Lys Ser
 50 55 60
 Asn Glu Ser His Asp His Met Asp Asp Met Asp Asp Glu Asp Asp Asp
 65 70 75 80
 Asp His Val Asp Ser Gln Asp Ser Ile Asp Ser Asn Asp Ser Asp Asp
 85 90 95
 Val Asp Asp Thr Asp Asp Ser His Gln Ser Asp Glu Ser His His Ser
 100 105 110
 Asp Glu Ser Asp Glu Leu Val Thr Asp Phe Pro Thr Asp Leu Pro Ala
 115 120 125
 Thr Glu Val Phe Thr Pro Val Val Pro Thr Val Asp Thr Tyr Asp Gly
 130 135 140
 Arg Gly Asp Ser Val Val Tyr Gly Leu Arg Ser Lys Ser Lys Lys Phe
 145 150 155 160
 Arg Arg Pro Asp Ile Gln Tyr Pro Asp Ala Thr Asp Glu Asp Ile Thr
 165 170 175
 Ser His Met Glu Ser Glu Glu Leu Asn Gly Ala Tyr Lys Ala Ile Pro
 180 185 190
 Val Ala Gln Asp Leu Asn Ala Pro Ser Asp Trp Asp Ser Arg Gly Lys
 195 200 205
 Asp Ser Tyr Glu Thr Ser Gln Leu Asp Asp Gln Ser Ala Glu Thr His
 210 215 220
 Ser His Lys Gln Ser Arg Leu Tyr Lys Arg Lys Ala Asn Asp Glu Ser
 225 230 235 240

Asn	Glu	His	Ser	Asp	Val	Ile	Asp	Ser	Gln	Glu	Leu	Ser	Lys	Val	Ser	
				245					250					255		
Arg	Glu	Phe	His	Ser	His	Glu	Phe	His	Ser	His	Glu	Asp	Met	Leu	Val	
				260					265					270		
Val	Asp	Pro	Lys	Ser	Lys	Glu	Glu	Asp	Lys	His	Leu	Lys	Phe	Arg	Ile	
				275					280					285		
Ser	His	Glu	Leu	Asp	Ser	Ala	Ser	Ser	Glu	Val	Asn					
				290					295					300		

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<210> 32
<211> 295
<212> PRT
<213> Homo sapiens
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<400> 32															
Met 1	Glu	His	Gln	Leu 5	Leu	Cys	Cys	Glu	Val 10	Glu	Thr	Ile	Arg	Arg 15	Ala
Tyr	Pro	Asp	Ala 20	Asn	Leu	Leu	Asn	Asp 25	Arg	Val	Leu	Arg	Ala 30	Met	Leu
Lys	Ala	Glu 35	Glu	Thr	Cys	Ala	Pro 40	Ser	Val	Ser	Tyr	Phe 45	Lys	Cys	Val
Gln	Lys 50	Glu	Val	Leu	Pro	Ser 55	Met	Arg	Lys	Ile	Val 60	Ala	Thr	Trp	Met
Leu 65	Glu	Val	Cys	Glu	Glu 70	Gln	Lys	Cys	Glu	Glu 75	Glu	Val	Phe	Pro	Leu 80
Ala	Met	Asn	Tyr	Leu 85	Asp	Arg	Phe	Leu	Ser 90	Leu	Glu	Pro	Val	Lys 95	Lys
Ser	Arg	Leu	Gln 100	Leu	Leu	Gly	Ala	Thr 105	Cys	Met	Phe	Val	Ala 110	Ser	Lys
Met	Lys 115	Glu	Thr	Ile	Pro	Leu	Thr 120	Ala	Glu	Lys	Leu	Cys 125	Ile	Tyr	Thr
Asp	Gly 130	Ser	Ile	Arg	Pro	Glu 135	Glu	Leu	Leu	Gln	Met 140	Glu	Leu	Leu	Leu
Val 145	Asn	Lys	Leu	Lys	Trp 150	Asn	Leu	Ala	Ala	Met 155	Thr	Pro	His	Asp	Phe 160
Ile	Glu	His	Phe	Leu 165	Ser	Lys	Met	Pro	Glu 170	Ala	Glu	Glu	Asn	Lys 175	Gln

Ile Ile Arg Lys His Ala Gln Thr Phe Val Ala Ser Cys Ala Thr Asp
 180 185 190
 Val Lys Phe Ile Ser Asn Pro Pro Ser Met Val Ala Ala Gly Ser Val
 195 200 205
 Val Ala Ala Val Gln Gly Leu Asn Leu Arg Ser Pro Asn Asn Phe Leu
 210 215 220
 Ser Tyr Tyr Arg Leu Thr Arg Phe Leu Ser Arg Val Ile Lys Cys Asp
 225 230 235 240
 Pro Asp Cys Leu Arg Ala Cys Gln Glu Gln Ile Glu Ala Leu Leu Glu
 245 250 255
 Ser Ser Leu Arg Gln Ala Gln Gln Asn Met Asp Pro Lys Ala Ala Glu
 260 265 270
 Glu Glu Glu Glu Glu Glu Glu Glu Val Asp Leu Ala Cys Thr Pro Thr
 275 280 285
 Asp Val Arg Asp Val Asp Ile
 290 295

<210> 33
 <211> 439
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Pro Leu Asn Val Ser Phe Thr Asn Arg Asn Tyr Asp Leu Asp Tyr
 1 5 10 15
 Asp Ser Val Gln Pro Tyr Phe Tyr Cys Asp Glu Glu Glu Asn Phe Tyr
 20 25 30
 Gln Gln Gln Gln Gln Ser Glu Leu Gln Pro Pro Ala Pro Ser Glu Asp
 35 40 45
 Ile Trp Lys Lys Phe Glu Leu Leu Pro Thr Pro Pro Leu Ser Pro Ser
 50 55 60
 Arg Arg Ser Gly Leu Cys Ser Pro Ser Tyr Val Ala Val Thr Pro Phe
 65 70 75 80
 Ser Leu Arg Gly Asp Asn Asp Gly Gly Gly Gly Ser Phe Ser Thr Ala
 85 90 95
 Asp Gln Leu Glu Met Val Thr Glu Leu Leu Gly Gly Asp Met Val Asn
 100 105 110
 Gln Ser Phe Ile Cys Asp Pro Asp Asp Glu Thr Phe Ile Lys Asn Ile

115					120					125					
Ile	Ile	Gln	Asp	Cys	Met	Trp	Ser	Gly	Phe	Ser	Ala	Ala	Ala	Lys	Leu
	130					135					140				
Val	Ser	Glu	Lys	Leu	Ala	Ser	Tyr	Gln	Ala	Ala	Arg	Lys	Asp	Ser	Gly
145					150					155					160
Ser	Pro	Asn	Pro	Ala	Arg	Gly	His	Ser	Val	Cys	Ser	Thr	Ser	Ser	Leu
				165					170					175	
Tyr	Leu	Gln	Asp	Leu	Ser	Ala	Ala	Ala	Ser	Glu	Cys	Ile	Asp	Pro	Ser
			180					185					190		
Val	Val	Phe	Pro	Tyr	Pro	Leu	Asn	Asp	Ser	Ser	Ser	Pro	Lys	Ser	Cys
		195					200					205			
Ala	Ser	Gln	Asp	Ser	Ser	Ala	Phe	Ser	Pro	Ser	Ser	Asp	Ser	Leu	Leu
	210					215					220				
Ser	Ser	Thr	Glu	Ser	Ser	Pro	Gln	Gly	Ser	Pro	Glu	Pro	Leu	Val	Leu
225					230					235					240
His	Glu	Glu	Thr	Pro	Pro	Thr	Thr	Ser	Ser	Asp	Ser	Glu	Glu	Glu	Gln
				245					250					255	
Glu	Asp	Glu	Glu	Glu	Ile	Asp	Val	Val	Ser	Val	Glu	Lys	Arg	Gln	Ala
			260					265					270		
Pro	Gly	Lys	Arg	Ser	Glu	Ser	Gly	Ser	Pro	Ser	Ala	Gly	Gly	His	Ser
		275					280					285			
Lys	Pro	Pro	His	Ser	Pro	Leu	Val	Leu	Lys	Arg	Cys	His	Val	Ser	Thr
	290					295					300				
His	Gln	His	Asn	Tyr	Ala	Ala	Pro	Pro	Ser	Thr	Arg	Lys	Asp	Tyr	Pro
305					310					315					320
Ala	Ala	Lys	Arg	Val	Lys	Leu	Asp	Ser	Val	Arg	Val	Leu	Arg	Gln	Ile
				325					330					335	
Ser	Asn	Asn	Arg	Lys	Cys	Thr	Ser	Pro	Arg	Ser	Ser	Asp	Thr	Glu	Glu
			340					345					350		
Asn	Val	Lys	Arg	Arg	Thr	His	Asn	Val	Leu	Glu	Arg	Gln	Arg	Arg	Asn
		355					360					365			
Glu	Leu	Lys	Arg	Ser	Phe	Phe	Ala	Leu	Arg	Asp	Gln	Ile	Pro	Glu	Leu
	370					375					380				
Glu	Asn	Asn	Glu	Lys	Ala	Pro	Lys	Val	Val	Ile	Leu	Lys	Lys	Ala	Thr
385					390					395					400
Ala	Tyr	Ile	Leu	Ser	Val	Gln	Ala	Glu	Glu	Gln	Lys	Leu	Ile	Ser	Glu

405 410 415
 Glu Asp Leu Leu Arg Lys Arg Arg Glu Gln Leu Lys His Lys Leu Glu
 420 425 430
 Gln Leu Arg Asn Ser Cys Ala
 435

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<210> 34
<211> 164
<212> PRT
<213> Homo sapiens
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[illegible]

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<210> 35
<211> 105
<212> PRT
<213> Homo sapiens
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<400> 35

Met Met Met Gly Ser Ala Arg Val Ala Glu Leu Leu Leu Leu His Gly
 1 5 10 15

Ala Glu Pro Asn Cys Ala Asp Pro Ala Thr Leu Thr Arg Pro Val His
 20 25 30

Asp Ala Ala Arg Glu Gly Phe Leu Asp Thr Leu Val Val Leu His Arg
 35 40 45

Ala Gly Ala Arg Leu Asp Val Arg Asp Ala Trp Gly Arg Leu Pro Val
 50 55 60

Asp Leu Ala Glu Glu Leu Gly His Arg Asp Val Ala Arg Tyr Leu Arg
 65 70 75 80

Ala Ala Ala Gly Gly Thr Arg Gly Ser Asn His Ala Arg Ile Asp Ala
 85 90 95

Ala Glu Gly Pro Ser Asp Ile Pro Asp
 100 105

<210> 36

<211> 173

<212> PRT

<213> Homo sapiens

<400> 36

Met Gly Arg Gly Arg Cys Val Gly Pro Ser Leu Gln Leu Arg Gly Gln
 1 5 10 15

Glu Trp Arg Cys Ser Pro Leu Val Pro Lys Gly Gly Ala Ala Ala Ala
 20 25 30

Glu Leu Gly Pro Gly Gly Gly Glu Asn Met Val Arg Arg Phe Leu Val
 35 40 45

Thr Leu Arg Ile Arg Arg Ala Cys Gly Pro Pro Arg Val Arg Val Phe
 50 55 60

Val Val His Ile Pro Arg Leu Thr Gly Glu Trp Ala Ala Pro Gly Ala
 65 70 75 80

Pro Ala Ala Val Ala Leu Val Leu Met Leu Leu Arg Ser Gln Arg Leu
 85 90 95

Gly Gln Gln Pro Leu Pro Arg Arg Pro Gly His Asp Asp Gly Gln Arg
 100 105 110

Pro Ser Gly Gly Ala Ala Ala Ala Pro Arg Arg Gly Ala Gln Leu Arg
 115 120 125

Arg Pro Arg His Ser His Pro Thr Arg Ala Arg Arg Cys Pro Gly Gly
 130 135 140

Leu Pro Gly His Ala Gly Gly Ala Ala Pro Gly Arg Gly Ala Ala Gly
 145 150 155 160

Arg Ala Arg Cys Leu Gly Pro Ser Ala Arg Gly Pro Gly
 165 170

<210> 37
 <211> 468
 <212> PRT
 <213> Homo sapiens

<400> 37
 Met Val Asp Thr Glu Ser Pro Leu Cys Pro Leu Ser Pro Leu Glu Ala
 1 5 10 15

Gly Asp Leu Glu Ser Pro Leu Ser Glu Glu Phe Leu Gln Glu Met Gly
 20 25 30

Asn Ile Gln Glu Ile Ser Gln Ser Ile Gly Glu Asp Ser Ser Gly Ser
 35 40 45

Phe Gly Phe Thr Glu Tyr Gln Tyr Leu Gly Ser Cys Pro Gly Ser Asp
 50 55 60

Gly Ser Val Ile Thr Asp Thr Leu Ser Pro Ala Ser Ser Pro Ser Ser
 65 70 75 80

Val Thr Tyr Pro Val Val Pro Gly Ser Val Asp Glu Ser Pro Ser Gly
 85 90 95

Ala Leu Asn Ile Glu Cys Arg Ile Cys Gly Asp Lys Ala Ser Gly Tyr
 100 105 110

His Tyr Gly Val His Ala Cys Glu Gly Cys Lys Gly Phe Phe Arg Arg
 115 120 125

Thr Ile Arg Leu Lys Leu Val Tyr Asp Lys Cys Asp Arg Ser Cys Lys
 130 135 140

Ile Gln Lys Lys Asn Arg Asn Lys Cys Gln Tyr Cys Arg Phe His Lys
 145 150 155 160

Cys Leu Ser Val Gly Met Ser His Asn Ala Ile Arg Phe Gly Arg Met
 165 170 175

Pro Arg Ser Glu Lys Ala Lys Leu Lys Ala Glu Ile Leu Thr Cys Glu
 180 185 190

His Asp Ile Glu Asp Ser Glu Thr Ala Asp Leu Lys Ser Leu Ala Lys
 195 200 205
 Arg Ile Tyr Glu Ala Tyr Leu Lys Asn Phe Asn Met Asn Lys Val Lys
 210 215 220
 Ala Arg Val Ile Leu Ser Gly Lys Ala Ser Asn Asn Pro Pro Phe Val
 225 230 235 240
 Ile His Asp Met Glu Thr Leu Cys Met Ala Glu Lys Thr Leu Val Ala
 245 250 255
 Lys Leu Val Ala Asn Gly Ile Gln Asn Lys Glu Ala Glu Val Arg Ile
 260 265 270
 Phe His Cys Cys Gln Cys Thr Ser Val Glu Thr Val Thr Glu Leu Thr
 275 280 285
 Glu Phe Ala Lys Ala Ile Pro Gly Phe Ala Asn Leu Asp Leu Asn Asp
 290 295 300
 Gln Val Thr Leu Leu Lys Tyr Gly Val Tyr Glu Ala Ile Phe Ala Met
 305 310 315 320
 Leu Ser Ser Val Met Asn Lys Asp Gly Met Leu Val Ala Tyr Gly Asn
 325 330 335
 Gly Phe Ile Thr Arg Glu Phe Leu Lys Ser Leu Arg Lys Pro Phe Cys
 340 345 350
 Asp Ile Met Glu Pro Lys Phe Asp Phe Ala Met Lys Phe Asn Ala Leu
 355 360 365
 Glu Leu Asp Asp Ser Asp Ile Ser Leu Phe Val Ala Ala Ile Ile Cys
 370 375 380
 Cys Gly Asp Arg Pro Gly Leu Leu Asn Val Gly His Ile Glu Lys Met
 385 390 395 400
 Gln Glu Gly Ile Val His Val Leu Arg Leu His Leu Gln Ser Asn His
 405 410 415
 Pro Asp Asp Ile Phe Leu Phe Pro Lys Leu Leu Gln Lys Met Ala Asp
 420 425 430
 Leu Arg Gln Leu Val Thr Glu His Ala Gln Leu Val Gln Ile Ile Lys
 435 440 445
 Lys Thr Glu Ser Asp Ala Ala Leu His Pro Leu Leu Gln Glu Ile Tyr
 450 455 460
 Arg Asp Met Tyr
 465

<210> 38

<211> 505

<212> PRT

<213> Homo sapiens

<400> 38

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Met Gly Glu Thr Leu Gly Asp Ser Pro Ile Asp Pro Glu Ser Asp Ser
  1              5              10              15

Phe Thr Asp Thr Leu Ser Ala Asn Ile Ser Gln Glu Met Thr Met Val
      20              25              30

Asp Thr Glu Met Pro Phe Trp Pro Thr Asn Phe Gly Ile Ser Ser Val
      35              40              45

Asp Leu Ser Val Met Glu Asp His Ser His Ser Phe Asp Ile Lys Pro
      50              55              60

Phe Thr Thr Val Asp Phe Ser Ser Ile Ser Thr Pro His Tyr Glu Asp
      65              70              75              80

Ile Pro Phe Thr Arg Thr Asp Pro Val Val Ala Asp Tyr Lys Tyr Asp
      85              90              95

Leu Lys Leu Gln Glu Tyr Gln Ser Ala Ile Lys Val Glu Pro Ala Ser
      100             105             110

Pro Pro Tyr Tyr Ser Glu Lys Thr Gln Leu Tyr Asn Lys Pro His Glu
      115             120             125

Glu Pro Ser Asn Ser Leu Met Ala Ile Glu Cys Arg Val Cys Gly Asp
      130             135             140

Lys Ala Ser Gly Phe His Tyr Gly Val His Ala Cys Glu Gly Cys Lys
      145             150             155             160

Gly Phe Phe Arg Arg Thr Ile Arg Leu Lys Leu Ile Tyr Asp Arg Cys
      165             170             175

Asp Leu Asn Cys Arg Ile His Lys Lys Ser Arg Asn Lys Cys Gln Tyr
      180             185             190

Cys Arg Phe Gln Lys Cys Leu Ala Val Gly Met Ser His Asn Ala Ile
      195             200             205

Arg Phe Gly Arg Met Pro Gln Ala Glu Lys Glu Lys Leu Leu Ala Glu
      210             215             220

Ile Ser Ser Asp Ile Asp Gln Leu Asn Pro Glu Ser Ala Asp Leu Arg
      225             230             235             240

Ala Leu Ala Lys His Leu Tyr Asp Ser Tyr Ile Lys Ser Phe Pro Leu

```

245										250					255				
Thr	Lys	Ala	Lys	Ala	Arg	Ala	Ile	Leu	Thr	Gly	Lys	Thr	Thr	Asp	Lys				
			260					265						270					
Ser	Pro	Phe	Val	Ile	Tyr	Asp	Met	Asn	Ser	Leu	Met	Met	Gly	Glu	Asp				
		275					280					285							
Lys	Ile	Lys	Phe	Lys	His	Ile	Thr	Pro	Leu	Gln	Glu	Gln	Ser	Lys	Glu				
	290					295					300								
Val	Ala	Ile	Arg	Ile	Phe	Gln	Gly	Cys	Gln	Phe	Arg	Ser	Val	Glu	Ala				
305					310					315					320				
Val	Gln	Glu	Ile	Thr	Glu	Tyr	Ala	Lys	Ser	Ile	Pro	Gly	Phe	Val	Asn				
				325					330					335					
Leu	Asp	Leu	Asn	Asp	Gln	Val	Thr	Leu	Leu	Lys	Tyr	Gly	Val	His	Glu				
			340					345					350						
Ile	Ile	Tyr	Thr	Met	Leu	Ala	Ser	Leu	Met	Asn	Lys	Asp	Gly	Val	Leu				
		355					360					365							
Ile	Ser	Glu	Gly	Gln	Gly	Phe	Met	Thr	Arg	Glu	Phe	Leu	Lys	Ser	Leu				
	370					375					380								
Arg	Lys	Pro	Phe	Gly	Asp	Phe	Met	Glu	Pro	Lys	Phe	Glu	Phe	Ala	Val				
385					390					395					400				
Lys	Phe	Asn	Ala	Leu	Glu	Leu	Asp	Asp	Ser	Asp	Leu	Ala	Ile	Phe	Ile				
			405						410					415					
Ala	Val	Ile	Ile	Leu	Ser	Gly	Asp	Arg	Pro	Gly	Leu	Leu	Asn	Val	Lys				
			420					425					430						
Pro	Ile	Glu	Asp	Ile	Gln	Asp	Asn	Leu	Leu	Gln	Ala	Leu	Glu	Leu	Gln				
		435					440					445							
Leu	Lys	Leu	Asn	His	Pro	Glu	Ser	Ser	Gln	Leu	Phe	Ala	Lys	Leu	Leu				
	450					455					460								
Gln	Lys	Met	Thr	Asp	Leu	Arg	Gln	Ile	Val	Thr	Glu	His	Val	Gln	Leu				
465					470					475					480				
Leu	Gln	Val	Ile	Lys	Lys	Thr	Glu	Thr	Asp	Met	Ser	Leu	His	Pro	Leu				
				485					490					495					
Leu	Gln	Glu	Ile	Tyr	Lys	Asp	Leu	Tyr											
			500					505											

<210> 39

<211> 441

<212> PRT

<213> Homo sapiens

<400> 39

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Met Glu Gln Pro Gln Glu Glu Ala Pro Glu Val Arg Glu Glu Glu Glu
 1              5              10              15

Lys Glu Glu Val Ala Glu Ala Glu Gly Ala Pro Glu Leu Asn Gly Gly
      20              25              30

Pro Gln His Ala Leu Pro Ser Ser Ser Tyr Thr Asp Leu Ser Arg Ser
      35              40              45

Ser Ser Pro Pro Ser Leu Leu Asp Gln Leu Gln Met Gly Cys Asp Gly
 50              55              60

Ala Ser Cys Gly Ser Leu Asn Met Glu Cys Arg Val Cys Gly Asp Lys
 65              70              75              80

Ala Ser Gly Phe His Tyr Gly Val His Ala Cys Glu Gly Cys Lys Gly
      85              90              95

Phe Phe Arg Arg Thr Ile Arg Met Lys Leu Glu Tyr Glu Lys Cys Glu
      100              105              110

Arg Ser Cys Lys Ile Gln Lys Lys Asn Arg Asn Lys Cys Gln Tyr Cys
      115              120              125

Arg Phe Gln Lys Cys Leu Ala Leu Gly Met Ser His Asn Ala Ile Arg
      130              135              140

Phe Gly Arg Met Pro Glu Ala Glu Lys Arg Lys Leu Val Ala Gly Leu
      145              150              155              160

Thr Ala Asn Glu Gly Ser Gln Tyr Asn Pro Gln Val Ala Asp Leu Lys
      165              170              175

Ala Phe Ser Lys His Ile Tyr Asn Ala Tyr Leu Lys Asn Phe Asn Met
      180              185              190

Thr Lys Lys Lys Ala Arg Ser Ile Leu Thr Gly Lys Ala Ser His Thr
      195              200              205

Ala Pro Phe Val Ile His Asp Ile Glu Thr Leu Trp Gln Ala Glu Lys
      210              215              220

Gly Leu Val Trp Lys Gln Leu Val Asn Gly Leu Pro Pro Tyr Lys Glu
      225              230              235              240

Ile Ser Val His Val Phe Tyr Arg Cys Gln Cys Thr Thr Val Glu Thr
      245              250              255

Val Arg Glu Leu Thr Glu Phe Ala Lys Ser Ile Pro Ser Phe Ser Ser
      260              265              270

```


Leu Phe Leu Asn Asp Gln Val Thr Leu Leu Lys Tyr Gly Val His Glu
 275 280 285
 Ala Ile Phe Ala Met Leu Ala Ser Ile Val Asn Lys Asp Gly Leu Leu
 290 295 300
 Val Ala Asn Gly Ser Gly Phe Val Thr Arg Glu Phe Leu Arg Ser Leu
 305 310 315 320
 Arg Lys Pro Phe Ser Asp Ile Ile Glu Pro Lys Phe Glu Phe Ala Val
 325 330 335
 Lys Phe Asn Ala Leu Glu Leu Asp Asp Ser Asp Leu Ala Leu Phe Ile
 340 345 350
 Ala Ala Ile Ile Leu Cys Gly Asp Arg Pro Gly Leu Met Asn Val Pro
 355 360 365
 Arg Val Glu Ala Ile Gln Asp Thr Ile Leu Arg Ala Leu Glu Phe His
 370 375 380
 Leu Gln Ala Asn His Pro Asp Ala Gln Tyr Leu Phe Pro Lys Leu Leu
 385 390 395 400
 Gln Lys Met Ala Asp Leu Arg Gln Leu Val Thr Glu His Ala Gln Met
 405 410 415
 Met Gln Arg Ile Lys Lys Thr Glu Thr Glu Thr Ser Leu His Pro Leu
 420 425 430
 Leu Gln Glu Ile Tyr Lys Asp Met Tyr
 435 440

<210> 40
 <211> 742
 <212> PRT
 <213> Homo sapiens

<400> 40
 Met Asp Lys Phe Trp Trp His Ala Ala Trp Gly Leu Cys Leu Val Pro
 1 5 10 15
 Leu Ser Leu Ala Gln Ile Asp Leu Asn Ile Thr Cys Arg Phe Ala Gly
 20 25 30
 Val Phe His Val Glu Lys Asn Gly Arg Tyr Ser Ile Ser Arg Thr Glu
 35 40 45
 Ala Ala Asp Leu Cys Lys Ala Phe Asn Ser Thr Leu Pro Thr Met Ala
 50 55 60

Gln Met Glu Lys Ala Leu Ser Ile Gly Phe Glu Thr Cys Arg Tyr Gly
 65 70 75 80
 Phe Ile Glu Gly His Val Val Ile Pro Arg Ile His Pro Asn Ser Ile
 85 90 95
 Cys Ala Ala Asn Asn Thr Gly Val Tyr Ile Leu Thr Ser Asn Thr Ser
 100 105 110
 Gln Tyr Asp Thr Tyr Cys Phe Asn Ala Ser Ala Pro Pro Glu Glu Asp
 115 120 125
 Cys Thr Ser Val Thr Asp Leu Pro Asn Ala Phe Asp Gly Pro Ile Thr
 130 135 140
 Ile Thr Ile Val Asn Arg Asp Gly Thr Arg Tyr Val Gln Lys Gly Glu
 145 150 155 160
 Tyr Arg Thr Asn Pro Glu Asp Ile Tyr Pro Ser Asn Pro Thr Asp Asp
 165 170 175
 Asp Val Ser Ser Gly Ser Ser Ser Glu Arg Ser Ser Thr Ser Gly Gly
 180 185 190
 Tyr Ile Phe Tyr Thr Phe Ser Thr Val His Pro Ile Pro Asp Glu Asp
 195 200 205
 Ser Pro Trp Ile Thr Asp Ser Thr Asp Arg Ile Pro Ala Thr Thr Leu
 210 215 220
 Met Ser Thr Ser Ala Thr Ala Thr Glu Thr Ala Thr Lys Arg Gln Glu
 225 230 235 240
 Thr Trp Asp Trp Phe Ser Trp Leu Phe Leu Pro Ser Glu Ser Lys Asn
 245 250 255
 His Leu His Thr Thr Thr Gln Met Ala Gly Thr Ser Ser Asn Thr Ile
 260 265 270
 Ser Ala Gly Trp Glu Pro Asn Glu Glu Asn Glu Asp Glu Arg Asp Arg
 275 280 285
 His Leu Ser Phe Ser Gly Ser Gly Ile Asp Asp Asp Glu Asp Phe Ile
 290 295 300
 Ser Ser Thr Ile Ser Thr Thr Pro Arg Ala Phe Asp His Thr Lys Gln
 305 310 315 320
 Asn Gln Asp Trp Thr Gln Trp Asn Pro Ser His Ser Asn Pro Glu Val
 325 330 335
 Leu Leu Gln Thr Thr Thr Arg Met Thr Asp Val Asp Arg Asn Gly Thr
 340 345 350

Thr Ala Tyr Glu Gly Asn Trp Asn Pro Glu Ala His Pro Pro Leu Ile
 355 360 365
 His His Glu His His Glu Glu Glu Glu Thr Pro His Ser Thr Ser Thr
 370 375 380
 Ile Gln Ala Thr Pro Ser Ser Thr Thr Glu Glu Thr Ala Thr Gln Lys
 385 390 395 400
 Glu Gln Trp Phe Gly Asn Arg Trp His Glu Gly Tyr Arg Gln Thr Pro
 405 410 415
 Lys Glu Asp Ser His Ser Thr Thr Gly Thr Ala Ala Ala Ser Ala His
 420 425 430
 Thr Ser His Pro Met Gln Gly Arg Thr Thr Pro Ser Pro Glu Asp Ser
 435 440 445
 Ser Trp Thr Asp Phe Phe Asn Pro Ile Ser His Pro Met Gly Arg Gly
 450 455 460
 His Gln Ala Gly Arg Arg Met Asp Met Asp Ser Ser His Ser Ile Thr
 465 470 475 480
 Leu Gln Pro Thr Ala Asn Pro Asn Thr Gly Leu Val Glu Asp Leu Asp
 485 490 495
 Arg Thr Gly Pro Leu Ser Met Thr Thr Gln Gln Ser Asn Ser Gln Ser
 500 505 510
 Phe Ser Thr Ser His Glu Gly Leu Glu Glu Asp Lys Asp His Pro Thr
 515 520 525
 Thr Ser Thr Leu Thr Ser Ser Asn Arg Asn Asp Val Thr Gly Gly Arg
 530 535 540
 Arg Asp Pro Asn His Ser Glu Gly Ser Thr Thr Leu Leu Glu Gly Tyr
 545 550 555 560
 Thr Ser His Tyr Pro His Thr Lys Glu Ser Arg Thr Phe Ile Pro Val
 565 570 575
 Thr Ser Ala Lys Thr Gly Ser Phe Gly Val Thr Ala Val Thr Val Gly
 580 585 590
 Asp Ser Asn Ser Asn Val Asn Arg Ser Leu Ser Gly Asp Gln Asp Thr
 595 600 605
 Phe His Pro Ser Gly Gly Ser His Thr Thr His Gly Ser Glu Ser Asp
 610 615 620
 Gly His Ser His Gly Ser Gln Glu Gly Gly Ala Asn Thr Thr Ser Gly
 625 630 635 640

Pro Ile Arg Thr Pro Gln Ile Pro Glu Trp Leu Ile Ile Leu Ala Ser
 645 650 655
 Leu Leu Ala Leu Ala Leu Ile Leu Ala Val Cys Ile Ala Val Asn Ser
 660 665 670
 Arg Arg Arg Cys Gly Gln Lys Lys Lys Leu Val Ile Asn Ser Gly Asn
 675 680 685
 Gly Ala Val Glu Asp Arg Lys Pro Ser Gly Leu Asn Gly Glu Ala Ser
 690 695 700
 Lys Ser Gln Glu Met Val His Leu Val Asn Lys Glu Ser Ser Glu Thr
 705 710 715 720
 Pro Asp Gln Phe Met Thr Ala Asp Glu Thr Arg Asn Leu Gln Asn Val
 725 730 735
 Asp Met Lys Ile Gly Val
 740

<210> 41
 <211> 489
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Leu Met Arg Leu Val Leu Thr Val Arg Ser Asn Leu Ile Pro Ser
 1 5 10 15
 Pro Pro Thr Tyr Asn Ser Ala His Asp Tyr Ile Ser Trp Glu Ser Phe
 20 25 30
 Ser Asn Val Ser Tyr Tyr Thr Arg Ile Leu Pro Ser Val Pro Lys Asp
 35 40 45
 Cys Pro Thr Pro Met Gly Thr Lys Gly Lys Lys Gln Leu Pro Asp Ala
 50 55 60
 Gln Leu Leu Ala Arg Arg Phe Leu Leu Arg Arg Lys Phe Ile Pro Asp
 65 70 75 80
 Pro Gln Gly Thr Asn Leu Met Phe Ala Phe Phe Ala Gln His Phe Thr
 85 90 95
 His Gln Phe Phe Lys Thr Ser Gly Lys Met Gly Pro Gly Phe Thr Lys
 100 105 110
 Ala Leu Gly His Gly Val Asp Leu Gly His Ile Tyr Gly Asp Asn Leu
 115 120 125
 Glu Arg Gln Tyr Gln Leu Arg Leu Phe Lys Asp Gly Lys Leu Lys Tyr

130	135	140
Gln Val Leu Asp Gly Glu Met Tyr Pro Pro Ser Val Glu Glu Ala Pro 145 150 155 160		
Val Leu Met His Tyr Pro Arg Gly Ile Pro Pro Gln Ser Gln Met Ala 165 170 175		
Val Gly Gln Glu Val Phe Gly Leu Leu Pro Gly Leu Met Leu Tyr Ala 180 185 190		
Thr Leu Trp Leu Arg Glu His Asn Arg Val Cys Asp Leu Leu Lys Ala 195 200 205		
Glu His Pro Thr Trp Gly Asp Glu Gln Leu Phe Gln Thr Thr Arg Leu 210 215 220		
Ile Leu Ile Gly Glu Thr Ile Lys Ile Val Ile Glu Glu Tyr Val Gln 225 230 235 240		
Gln Leu Ser Gly Tyr Phe Leu Gln Leu Lys Phe Asp Pro Glu Leu Leu 245 250 255		
Phe Gly Val Gln Phe Gln Tyr Arg Asn Arg Ile Ala Met Glu Phe Asn 260 265 270		
His Leu Tyr His Trp His Pro Leu Met Pro Asp Ser Phe Lys Val Gly 275 280 285		
Ser Gln Glu Tyr Ser Tyr Glu Gln Phe Leu Phe Asn Thr Ser Met Leu 290 295 300		
Val Asp Tyr Gly Val Glu Ala Leu Val Asp Ala Phe Ser Arg Gln Ile 305 310 315 320		
Ala Gly Arg Ile Gly Gly Gly Arg Asn Met Asp His His Ile Leu His 325 330 335		
Val Ala Val Asp Val Ile Arg Glu Ser Arg Glu Met Arg Leu Gln Pro 340 345 350		
Phe Asn Glu Tyr Arg Lys Arg Phe Gly Met Lys Pro Tyr Thr Ser Phe 355 360 365		
Gln Glu Leu Val Gly Glu Lys Glu Met Ala Ala Glu Leu Glu Glu Leu 370 375 380		
Tyr Gly Asp Ile Asp Ala Leu Glu Phe Tyr Pro Gly Leu Leu Leu Glu 385 390 395 400		
Lys Cys His Pro Asn Ser Ile Phe Gly Glu Ser Met Ile Glu Ile Gly 405 410 415		
Ala Pro Phe Ser Leu Lys Gly Leu Leu Gly Asn Pro Ile Cys Ser Pro		

420							425				430					
Glu	Tyr	Trp	Lys	Pro	Ser	Thr	Phe	Gly	Gly	Glu	Val	Gly	Phe	Asn	Ile	
435							440				445					
Val	Lys	Thr	Ala	Thr	Leu	Lys	Lys	Leu	Val	Cys	Leu	Asn	Thr	Lys	Thr	
450							455				460					
Cys	Pro	Tyr	Val	Ser	Phe	Arg	Val	Pro	Asp	Ala	Ser	Gln	Asp	Asp	Gly	
465							470				475					480
Pro	Ala	Val	Glu	Arg	Pro	Ser	Thr	Glu								
485																

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<210> 42
<211> 96
<212> PRT
<213> Homo sapiens
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<400>	42															
Met	Ser	Glu	Ser	Ser	Ser	Lys	Ser	Ser	Gln	Pro	Leu	Ala	Ser	Lys	Gln	
1				5					10					15		
Glu	Lys	Asp	Gly	Thr	Glu	Lys	Arg	Gly	Arg	Gly	Arg	Pro	Arg	Lys	Gln	
			20					25					30			
Pro	Pro	Lys	Glu	Pro	Ser	Glu	Val	Pro	Thr	Pro	Lys	Arg	Pro	Arg	Gly	
		35					40					45				
Arg	Pro	Lys	Gly	Ser	Lys	Asn	Lys	Gly	Ala	Ala	Lys	Thr	Arg	Lys	Thr	
	50					55					60					
Thr	Thr	Thr	Pro	Gly	Arg	Lys	Pro	Arg	Gly	Arg	Pro	Lys	Lys	Leu	Glu	
65					70					75					80	
Lys	Glu	Glu	Glu	Glu	Gly	Ile	Ser	Gln	Glu	Ser	Ser	Glu	Glu	Glu	Gln	
				85					90					95		

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<210> 43
<211> 79
<212> PRT
<213> Homo sapiens
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<400> 43
Met Ala His Lys Gln Ile Tyr Tyr Ser Asp Lys Tyr Phe Asp Glu His
  1                      5                      10                      15
Tyr Glu Tyr Arg His Val Met Leu Pro Arg Glu Leu Ser Lys Gln Val
      20                      25                      30

```

Pro Lys Thr His Leu Met Ser Glu Glu Glu Trp Arg Arg Leu Gly Val
 35 40 45

Gln Gln Ser Leu Gly Trp Val His Tyr Met Ile His Glu Pro Glu Pro
 50 55 60

His Ile Leu Leu Phe Arg Arg Pro Leu Pro Lys Asp Gln Gln Lys
 65 70 75

<210> 44

<211> 885

<212> PRT

<213> Homo sapiens

<400> 44

Met Val Leu Ser Gly Cys Ala Ile Ile Val Arg Gly Gln Pro Arg Gly
 1 5 10 15

Gly Pro Pro Pro Glu Arg Gln Ile Asn Leu Ser Asn Ile Arg Ala Gly
 20 25 30

Asn Leu Ala Arg Arg Ala Ala Ala Thr Gln Pro Asp Ala Lys Asp Thr
 35 40 45

Pro Asp Glu Pro Trp Ala Phe Pro Ala Arg Glu Phe Leu Arg Lys Lys
 50 55 60

Leu Ile Gly Lys Glu Val Cys Phe Thr Ile Glu Asn Lys Thr Pro Gln
 65 70 75 80

Gly Arg Glu Tyr Gly Met Ile Tyr Leu Gly Lys Asp Thr Asn Gly Glu
 85 90 95

Asn Ile Ala Glu Ser Leu Val Ala Glu Gly Leu Ala Thr Arg Arg Glu
 100 105 110

Gly Met Arg Ala Asn Asn Pro Glu Gln Asn Arg Leu Ser Glu Cys Glu
 115 120 125

Glu Gln Ala Lys Ala Ala Lys Lys Gly Met Trp Ser Glu Gly Asn Gly
 130 135 140

Ser His Thr Ile Arg Asp Leu Lys Tyr Thr Ile Glu Asn Pro Arg His
 145 150 155 160

Phe Val Asp Ser His His Gln Lys Pro Val Asn Ala Ile Ile Glu His
 165 170 175

Val Arg Asp Gly Ser Val Val Arg Ala Leu Leu Leu Pro Asp Tyr Tyr
 180 185 190

Leu Val Thr Val Met Leu Ser Gly Ile Lys Cys Pro Thr Phe Arg Arg

195	200	205
Glu Ala Asp Gly Ser Glu Thr Pro Glu Pro Phe Ala Ala Glu Ala Lys 210 215 220		
Phe Phe Thr Glu Ser Arg Leu Leu Gln Arg Asp Val Gln Ile Ile Leu 225 230 235 240		
Glu Ser Cys His Asn Gln Asn Ile Val Gly Thr Ile Leu His Pro Asn 245 250 255		
Gly Asn Ile Thr Glu Leu Leu Leu Lys Glu Gly Phe Ala Arg Cys Val 260 265 270		
Asp Trp Ser Ile Ala Val Tyr Thr Arg Gly Ala Glu Lys Leu Arg Ala 275 280 285		
Ala Glu Arg Phe Ala Lys Glu Arg Arg Leu Arg Ile Trp Arg Asp Tyr 290 295 300		
Val Ala Pro Thr Ala Asn Leu Asp Gln Lys Asp Lys Gln Phe Val Ala 305 310 315 320		
Lys Val Met Gln Val Leu Asn Ala Asp Ala Ile Val Val Lys Leu Asn 325 330 335		
Ser Gly Asp Tyr Lys Thr Ile His Leu Ser Ser Ile Arg Pro Pro Arg 340 345 350		
Leu Glu Gly Glu Asn Thr Gln Asp Lys Asn Lys Lys Leu Arg Pro Leu 355 360 365		
Tyr Asp Ile Pro Tyr Met Phe Glu Ala Arg Glu Phe Leu Arg Lys Lys 370 375 380		
Leu Ile Gly Lys Lys Val Asn Val Thr Val Asp Tyr Ile Arg Pro Ala 385 390 395 400		
Ser Pro Ala Thr Glu Thr Val Pro Ala Phe Ser Glu Arg Thr Cys Ala 405 410 415		
Thr Val Thr Ile Gly Gly Ile Asn Ile Ala Glu Ala Leu Val Ser Lys 420 425 430		
Gly Leu Ala Thr Val Ile Arg Tyr Arg Gln Asp Asp Asp Gln Arg Ser 435 440 445		
Ser His Tyr Asp Glu Leu Leu Ala Ala Glu Ala Arg Ala Ile Lys Asn 450 455 460		
Gly Lys Gly Leu His Ser Lys Lys Glu Val Pro Ile His Arg Val Ala 465 470 475 480		
Asp Ile Ser Gly Asp Thr Gln Lys Ala Lys Gln Phe Leu Pro Phe Leu		

770	775	780
Arg Thr Asp Ala Val Asp Ser Val Val Arg Asp Ile Gln Asn Thr Gln 785 790 795 800		
Cys Leu Leu Asn Val Glu His Leu Ser Ala Gly Cys Pro His Val Thr 805 810 815		
Leu Gln Phe Ala Asp Ser Lys Gly Asp Val Gly Leu Gly Leu Val Lys 820 825 830		
Glu Gly Leu Val Met Val Glu Val Arg Lys Glu Lys Gln Phe Gln Lys 835 840 845		
Val Ile Thr Glu Tyr Leu Asn Ala Gln Glu Ser Ala Lys Ser Ala Arg 850 855 860		
Leu Asn Leu Trp Arg Tyr Gly Asp Phe Arg Ala Asp Asp Ala Asp Glu 865 870 875 880		
Phe Gly Tyr Ser Arg 885		

<210> 45
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 45
 agatattgca cgggagaata tacaaa

26

<210> 46
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 46
 tcaattcctg aaattaaagt tcggata

27

<210> 47

<211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 47
 tctgcagagt tggaagcact cta

23

<210> 48
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 48
 gccgaggctt ttctaccaga a

21

<210> 49
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 49
 catggcttga tcagcaagga

20

<210> 50
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 50
 tggaagtgtg ccctgaagaa g

21

<210> 51
 <211> 23
 <212> DNA
 <213> Homo sapiens

<400> 51
 caaggagctg acttcggaac taa 23

<210> 52
 <211> 22
 <212> DNA
 <213> Homo sapiens

<400> 52
 agggaagacg atgtggtttt ca 22

<210> 53
 <211> 22
 <212> DNA
 <213> Homo sapiens

<400> 53
 gggacatgtg gagagcctac tc 22

<210> 54
 <211> 21
 <212> DNA
 <213> Homo sapiens

<400> 54
 catcatagtt ccccgagca t 21

<210> 55
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 55
 aagcagcacc agcaagtgaa g 21

<210> 56
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 56
 tcatggcctg tgtcagtcaa a 21

<210> 57
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 57
 acatgccagc cactgtgata ga 22

<210> 58
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 58
 ccctgccttc acaatgatct c 21

<210> 59
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 59
 ggaattcacc tcaagaacat cca 23

<210> 60
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 60
agtgtggcta tgacttcggt ttg

23

<210> 61
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 61
cagccacaag cagtccagat ta

22

<210> 62
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 62
cctgactatc aatcacatcg gaat

24

<210> 63
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 63
ccaggtgctc cacatgacag t 21

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 64
aaacaaccaa caacaaggag aatg 24

<210> 65
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 65
cgtctccaca catcagcaca a 21

<210> 66
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 66
tcttggcagc aggatagtc tt 22

<210> 67
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

primer

<400> 67
gcagaccagc atgacagatt tc 22

<210> 68
<211> 20
<212> DNA
<213> Artificial Sequence ,

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 68
gcggattagg gcttcctctt 20

<210> 69
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 69
ggcaccagag gcagtaacca t 21

<210> 70
<211> 23
<212> DNA
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primer

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<210> 78

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<210> 82

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<210> 83

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<210> 84
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<210> 85
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<210> 86
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<210> 87
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<223> Description of Artificial Sequence: Synthetic
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<400> 87
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22

<210> 88
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<400> 88
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23